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Paul Richards.

Bakers' Bread

Appendix

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Paul Richards.

Bakers' Bread

With Appendix
Prepared for Fourth Edition

By
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FOURTH EDITION

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FOREWORD.

I HAVE included in this book the different methods of bread making used in America and in Europe. The making and use of the different yeasts are explained in simple terms, also the methods of ferments, sponge and straight doughs. The recipes are explained in a manner to insure success, and are so arranged that they may be adapted to the requirements of different bakeries, besides giving the up-to-date baker a variety of suggestions for many kinds of bread.

The variety of flours used in the different parts of this country often makes it difficult to work the same recipes equally well in all places. Bakers coming from the East find it hard to work with the flours of the West, and *vice versa;* the treatment of doughs also varies very much in different shops. Almost all these points have been covered in this book.

Baking is a business of many details, and it pays at all times to be particular in the small points of the work. The success of our foremost bakers is due to the fact that they have mastered these details and studied the business theoretically as well as practically.

From year to year the baking industry has advanced to a more and more scientific basis; for this reason every baker should try to obtain a technical education to be able to test his own materials, and to control the conditions under which he makes his bread. Thus prepared, he could go

to any part of the country and produce a uniform bread everywhere.

The old-time guess work, the trusting to good luck, must go. Every progressive baker should use the thermometer in his shop; by careful attention to the temperature of the shop and materials, also to the weight of the flour and water, the baker is able to make a dough of a uniform temperature, which can be relied upon to be ready at a certain time. The oven should be provided with a good pyrometer, by means of which the knowledge of the baking heat can be readily acquired. If a shop is supplied with the right kind of appliances, and the baker learns how to use them, it leaves out guess work and makes good results certain.

Hoping the book will prove useful to the baker I submit it herewith to the fraternity.

Paul Richards.

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Dough-Making Methods.

SPONGE AND DOUGH.

The system of sponge and dough is the most largely used by bakers. It saves yeast and has some advantages over straight doughs, because it enables the baker to make different kinds of doughs out of one sponge. A sponge can be set for a longer time than a straight dough, and if it gets too old more water can be added to save it, although it is not advisable to use too old a sponge because too long fermentation takes out flavor.

Sponges are termed "long" and "short" sponges according to the length of time required during the fermentation till it is ready for doughing.

The time can be made long or short by using more or less yeast, and increasing or lowering the temperature of the water when setting the sponge, and also by making a slacker or tighter sponge—that is to use less or more flour in mixing. When setting sponge with compressed yeast the yeast is made stronger by dissolving it before setting the sponge and working it with some flour and warm water into a soft paste or batter. And setting it aside for twenty minutes in a warm place. When this time has elapsed it is thinned up with the other water and the sponge is finished.

The flour should not be drawn in all at one time; about half of it should be taken at first and worked in and then the rest should be added and beaten in good and dry. This assures a good sponge The sponge rises up evenly, and when it reaches maturity it shows bubbles. After some time the bubbles burst and give off gas and the sponge drops in the centre, and when it is down about two inches it is ready for doughing. This stage is termed the "first drop." If a sponge is not taken at this stage it begins to rise again after some time, and then drops again; this is the "second drop." With a strong flour the fermentation will continue in this manner till all the strength of the flour is exhausted, and the sponge turns sour.

Many bakers like to take the sponge on the second drop, and claim it is better for the stronger flours to use it at this stage; it

makes a larger loaf, gives more expansion. But I prefer to take sponges on the first drop, because it gives a better flavored loaf. A sponge should not be taken when it is rising; after it has attained the drop it should be taken going down and before rising again.

Where different grades of flour are used it is best to use the stronger flour for the sponge and the weaker for doughing. A sponge made out of weak flour should not be given much age; it should be taken always at the first drop, because the flour loses its resistance and would cause a small, heavy loaf. A sponge of weak flour should be set tighter than a sponge of stronger flour.

The long sponges are useful for the baker because they can be set in the evening and taken in the morning. The night sponges are set at 8 or 9 p. m., and taken at 4 and 5 a. m. This gives a good night's rest to the baker, and the dough can be got ready in a short time for moulding.

The short sponges are set in the morning, and a sponge can be got ready to the drop in a very short time. It depends merely on the temperature and on the amount of yeast used. Compressed yeast is the strongest and a very short sponge can be made by its use.

DOUGH MADE WITH SPONGE.

A dough made with a sponge differs from a straight dough because it requires a shorter time to get ready for use. The time for a sponge dough to get ready for use is from one to one and a halt flours. A half sponge dough is when one-half of the water or milk is used in the sponge and the other half is put on for doughing. If more sponge is used, like in a two-thirds sponge or three-quarter sponge, the time is shortened by half. For some kinds of rolls an in goods where a strong proof is required, like in coffeecake, the sponge is used, straight, only the eggs, sugar and butter are added and more flour is worked in to give the proper consistency to the dough.

STRAIGHT DOUGH.

The straight or off-hand dough process is coming more and more in favor with the bakers; it saves time and labor, and makes the sweetest and best flavored bread. The straight dough is made by mixing all the materials at one time. It can be made with any kind of yeast, but making straight dough has come more in use since the stronger and more reliable compressed yeast became better known. A straight dough requires more yeast than a sponge dough,

and the larger the quantity of yeast used in it the sooner it will be ready for use.

If a straight dough is set at a warm temperature and with the right quantity of yeast, it can be got ready for moulding in four hours. A straight dough can also be set at a cool temperature in the evening, and used in the morning.

SHORT AND LONG-TIMED STRAIGHT DOUGHS.

The advantages of short straight doughs over sponge doughs are many. They save time and labor, and all the baking can be done during the daytime. Practical bakers prefer short doughs because they can be watched during the time they are coming, and the best results are obtained. Straight doughs set over night cannot be timed accurately, because of the changes in the outside temperature, which may cause such doughs to ripen earlier or later as the case may be. By using less yeast and iced water a straight dough can be made to come slow and be ready in from ten to twelve hours even during the hottest season. For example: A straight dough to be ready for moulding in about four hours should be managed in the following manner: For a two-pail batch, 20 quarts, take ten ounces of compressed yeast, twelve ounces of salt, twelve ounces of sugar and twenty ounces of lard. Make the dough at a warm temperature so that it will register from eighty to eighty-five degrees Fahr., when made, and have the shop at a similar temperature, say from seventy-five to eighty degrees. This temperature should be kept up evenly till the moulded loaves are ready for the oven. Make a good medium firm dough. Particular attention should be paid to the mixing; a well mixed dough with plenty of air beaten in will prove well and make a finer grained and larger loaf than a dough mixed carelessly and insufficiently. At the given temperature the dough should be cut over after lying for two hours, given one hour to come and cut over again; after half an hour rest the dough is ready for moulding. A large dough should be divided in several parts during the cutting over and each piece well worked over. All this helps to make a good strong dough and a good loaf. Where there is plenty of oven space, or continuous ovens, several batches can be made in succession, and the dough can be timed to be ready when required.

For an overnight dough made after the same recipe a lower temperature and less yeast are required. Take about three ounces of yeast for a two-pail batch, and set the dough at about seventy

degrees Fahr. This dough set at six in the evening, would be ready at about six in the morning, excepting in case of excessive changes of temperature during this time. It would improve this dough if it could get a cutting over after lying for about eight hours, and after four more hours it could be taken at once for moulding. If it is not cut over during the twelve hours, the dough rises to full maturity, then flattens and falls like a sponge. For such a dough it is preferable to give it only a little time on the bench to recover, then mould and pan at once.

During the hot season the doughs require a still lower temperature, and the amount of salt may be increased to ten ounces for the pail; while during the cold winter months more yeast and less salt is the general rule. Large batches also require less yeast to the pail than small ones, or two-pail batches.

A straight dough after it is ready for moulding can be made into rolls, coffee cake, etc., by adding more sugar and butter or lard in the same manner as adding to a sponge.

TEMPERATURE IN DOUGH-MAKING.

To obtain uniform results in baking, a baker should use a thermometer and keep the shop at an even temperature. The temperature of the shop, of the flour and of the water should be taken; and if a sponge is used the temperature of it should also be taken before doughing. A temperature from 70° F. to 75° F., is considered the most favorable for a dough. A dough at this temperature becomes stronger and makes a better loaf and allows the use of a softer dough than if a higher temperature is used. At a higher temperature the dough rises faster and can be taken at a shorter time, but loses strength. It can not stand as much proof, and makes consequently a smaller loaf.

To obtain the right temperature for a dough to be set at 75°, we take the temperature of the flour. Say it is only 50° and the shop is 70°; this would require the water to be about 102° to make up 75° in the sponge to allow for heat absorbed by the cooler shop.

Short straight doughs are set at a temperature from 80° to 85° and are not affected or weakened by this temperature.

The size of a trough is an important factor in making the dough. It should be large enough to give plenty of room for working it from one side to the other and should be supplied with a movable partition. A dough should also have plenty of room to prove up after it is made, and not be penned up in too small a space.

A dough should get the right fermentation before it is worked over. It should come up till it starts to break, then it should be worked down well and allowed to come up again, given another cut, allowed to come on and then it is ready to be used. A baker should always be careful in taking a dough, because only a practical experience will teach when the dough has got the proper age. When a dough gets the right age it loses the green feeling and becomes dry and strong, and does not stick to the fingers. It is a point learned only by experience.

USING ICE IN SPONGE AND DOUGH.

During the hot season there is often serious trouble ahead for the baker in the necessity to keep the doughs from getting too old and having sour bread. Although much can be done to keep a shop cool by means of fans and spraying with water, and also the flour can possibly be kept in a cooler place than where it is kept during the cold months, still something is liable to happen any time; the sudden atmospheric changes upset all ordinary calculations and the result is sour bread.

To counteract these atmospheric influences some of our modern bakeries are using large refrigerating rooms, and have regular ice-machines for this purpose, just like the cold storage plants. By this means they are able to control the dough at will and obtain a uniform loaf of bread at any time of the year. Ice plants like this are expensive, and bakers who have no such advantages have to use ice and iced water for sponge and dough. For this reason it is advisable not to make too large batches of dough, because a smaller batch is easier controlled. A large batch should be made into two small ones like this: For instance, we intend to make a twelve-pail batch in warm weather, we set sponge with six pails of water and and the proper amount of yeast or ferment. When the sponge is ready we proceed and make the dough; we put on the other six pails of water with the salt in it. Even in summer the average spring and hydrant water is cool enough to be used as it is, but where this is not the case, and the flour is overheated or the shop too hot, iced water has to be used to get the right temperature. We break up the sponge well and transfer one-half of it to the other trough. If the weather is very warm we can add a couple of pieces of ice and another handful of salt to the part of the broken sponge which is intended for the second batch, and make up the first half into dough. When this dough is ready we can commence to make

up the second batch or wait as we see fit. This way of making dough in two batches instead of in one is probably slower, but there is not so much danger of sour bread, especially where there is not enough oven space to bake the bread at one time, as it gives from thirty minutes to one hour's time between the two batches. Salt is also a check on fermentation and it should be used more freely in summer.

MILK IN DOUGH MIXTURES.

Milk makes a very palatable bread, and it can be used in straight doughs as well as in sponges without any danger of souring, if handled carefully. Many bakers object to using milk in doughs because it is more difficult than water to use with yeast. I would not advise its use in sponges of a high temperature without boiling it before using, but it will work all right in a cool sponge.

When using all milk for bread, I should prefer using it in a straight dough. When only half or part milk is used, I should sponge with water and use the milk for doughing.

Milk that is beginning to turn can be used for doughing by adding a teaspoonful of baking soda to the gallon of milk. Sour milk, if put on a sponge for doughing, will make the fermentation more rapid, and ages the dough in a shorter time; but it should not be used with the yeast in a sponge. In the hot season I would not advise the use of milk in very large batches, because it will make the dough prove faster and it requires close watching and a cool treatment.

Milk takes up less flour than the same quantity of water, and in consequence will make a firmer dough, which will bake quicker. It will also give more color to the crust in baking, and the crumb is of a rich cream color.

LIME WATER IN BAKING.

Like alum, lime water has been used for years in bread-making, to improve weak bodied flours. The use of alum has been given up for sanitary reasons, but lime water is still used to correct flours, which have got damp in the package and become musty or sour.

It is also used in green flours which run in the dough, caused by unripe and sprouted wheat. In some flours, like the Oregon flour, which contain very little gluten, and can not stand much proof, lime water is used to strengthen the flour and to allow more proof in the dough. Although weak flours as a general rule require less yeast than the strong flours, if lime water is used with a weak

flour, it requires also a strong, vigorous yeast or ferment, because the lime water checks fermentation; but the dough should be taken young, when it is up the first time. The lime water is made like the pickle which is used for preserving eggs, only leave the salt out. Take one pound of fresh dry slacked lime and stir it up well with one pail of twelve quarts of water; let it settle, and draw off the clear liquid without disturbing the sediment on the bottom. Use from one to two quarts of it for the pail of dough and use it in the dough only, not in the sponge. Use more yeast in the sponge. The proportions I have given apply to the Oregon flours, which I used at that time of my experiments. As some flours work differently, and are stronger or weaker, they require more or less of the lime water.

EFFECT OF ALTITUDE ON BAKING MIXTURES.

It is always a puzzle to bakers, used to work in lower altitudes, that some of the general recipes do not work as usual, and even the yeast works more vigorously in the doughs and sponges when they get out west in the higher altitudes of Colorado and other mountain states. I had some experience of it at the time I worked at Denver, but this difference is still more pronounced at the more elevated cities of Leadville and Cripple Creek. Bread and rolls prove more rapidly and require less yeast (or a weaker grade of yeast), and this can easily be regulated. The greatest difficulty is with the cake mixtures. The ordinary mixtures will rise and fall during baking as if there was too much baking powder in it, and the rich grades of cakes were the most difficult to make. I had a man with me who had been there for some years, and through him I learned to overcome this difficulty.

In comparing our recipes I found less sugar was used in all of them and in some more flour, also less baking powder and ammonia. In rich mixtures like pound-cake, wine-cake and other loaf-cakes, it amounted to from three to four ounces to the pound of sugar less, and in the layer-cake mixtures (also for jelly-roll) it was about two ounces less,. The amount of baking powder is about half, and in some mixtures one-third less than is required in the eastern mixtures; the same also with ammonia. Lady-finger mixtures and also angel cake and sunshine cake stand more flour, about two ounces more to the pound of flour than is given in ordinary mixtures.

It seems the higher altitudes would require still less leavening agents, and also less shortening and sugar.

SOFT-CRUSTED BREADS.

Although some food experts say that the crust is the best part of the bread, and contains the most nourishment, the public in general prefer a soft, thin-crusted bread. The richer grades of bread, which contain milk, sugar or lard, are liked better than the all-water breads. I have observed myself that in a restaurant where several kinds of bread were served in one basket, the soft-crusted and richer breads were liked better and more used than the hard, tough-crusted French breads.

The French bread, which should be the ideal dinner bread, gives more and more way to the richer and softer-crusted Vienna bread. Many bakers, who are making French bread, add milk or sugar and shortening to it, and in some bakeries it is made altogether out of the Vienna dough, only in the shape of the long, narrow French loaves, and given a little more crust in baking. To produce a soft and brittle crust, with a good bloom, to make a good Vienna bread, it is necessary to have a good oven, which holds steam. It is the steam which forms a coat of moisture on the loaf when it is put in the oven, gives the dough time to expand, and forms the soft, even crust, which is so well liked.

This soft crust can also be produced on panbreads, if they are baked in steam; and in an oven without steam attachments the same soft, thin crust is produced by covering the panbreads during baking with another pan; or have pans made with a cover to fit, and made in single and double pans. The loaves weigh about two pounds and a quarter in the dough, which fills the pan when proved and baked, and makes a nice, square slice of bread with a thin crust.

Every baker knows sugar and milk give color to the crust in baking, and lard or butter makes the crust short and brittle. If all milk is used, the crust colors too much, and is soft and dark brown, not as good as if only one-half or only one-third milk is used, and some lard with it. A very good crust is also produced by leaving out the milk and using sugar and lard only; but then some of the pleasant taste, which milk gives to the bread, is missing. For a good Vienna bread, the best combination would be for a three-gallon pail, about one gallon of milk, two of water, one pound of lard, twelve ounces of sugar, or one pound of glucose, and eight ounces of salt. Sponge with water, and put on the milk for doughing, and use a good, strong flour. The same mixture may be used for Cream Bread and Pullman, with some soft flour added; this should make

a good loaf. If Vienna bread is baked in an oven which does not hold steam, it should be washed with water before going into the oven, and when withdrawn a thin cornstarch wash should be used to glaze it. A good egg-wash can also be used before baking; but in this case the bread is not washed after coming out. All these breads require a cool treatment in the sponge and dough, and if the loaves during the proving process are exposed to draughts or a dry heat, a crust is formed on the dough which will show after they are baked. For this reason it is best to prove it in a box, proving closet or in closed pans, and get it in the oven as moist as possible. The result will be a nice, thin crust and a good bloom.

Another kind of bread of a short and brittle crust is produced in the split loaves, and also in the small split rolls. This class of breads require no steam, but milk and shortening are used, and they are washed with lard before they are pressed in with the rolling-pin, and this produces the brittle crust when baked. A little practical study of this subject will teach any baker to obtain the desired crust.

OVEN TEMPERATURES, ETC.

The baking heat for bread is often registered as from 350 to 500 degrees Fahrenheit in the different makes of ovens; and this depends largely on how near or how far the meter is placed from the furnace. For this reason a certain scale cannot be adopted for all ovens. A few trials will teach the right degree of baking heat, and each baker should fix his own scale to suit the oven he is using. In ovens which register 450 degrees as the right heat for white bread, a slightly higher degree (say 480 to 500 degrees) may be used for rye breads, 450 for white and French and Vienna bread and rolls; 300 to 350 for the different cakes and a lower degree for macaroons, meringues, etc.

To avoid confusion in regard to the size of pails referred to in various recipes in the pages following, the size should be understood to be a ten-quart pail (20 pounds of water), except in cases where the pail is given as a twelve-quart pail.

Home Made Breads.

The name "home made" has always been an attraction to the public; it suggests something better and superior, more healthful and substantial, than ordinary bread. That is the reason why home-made breads often bring a higher price than others. The method of making bread in families is mostly by means of a straight dough; the dough is generally set in the evening and left to rise. In the morning it is kneaded, again left to rise a short time, then it is moulded into loaves, proved and baked.

The older recipes for home made bread called for water only; some for half milk; and no shortening is mentioned in any of them. They all used stock and potato yeast. The more modern recipes mention sugar and lard, besides milk and also compressed yeast. Some use boiled and grated potatoes, and others scalded corn-meal.

It is significant that with the introduction of compressed yeast the recipes begin to change, and shortening and sugar is used. It seems to indicate that something was lacking in the breads after giving up the use of stock yeast and potato ferment, and the sugar and lard were added as an improvement. Many old bakers assert that the old process makes a better bread, keeps it moister and gives a better flavored loaf. The family-made bread is heavier than the average bakers' bread, but it is good to eat and retains more moisture. It is not so great in volume, but it is more substantial. The objection raised against some bakers' bread is always: "It is too spongy and not substantial enough." Home made breads are generally baked in single pans in one and two-pound loaves; but there is no certain rule. Sometimes hearth-baked breads are sold as home-made. The loaves are washed by some bakers before baking, and others brush the tops with lard or melted butter when taking them from the oven. This makes the crust brittle, and gives it a pleasant taste.

To meet this objection, and to make something more like a family loaf, I give here some of the old recipes which can be used

for pan breads and also for hearth breads; only if hearth-baked, a firmer dough is required. In all these recipes where a pail is indicated, a ten-quart pail is intended, unless otherwise specified:

No. 1.—One pail ferment, 3 pails water, 1½ pounds salt. Make a straight dough in the evening. Set rather cool (about 65° F.) at 9 p. m., and take it at 5 a. m., or sooner, if it is ready; work it down and let it come up again; knock it down once more; let it come up half, and make into loaves. Do not give full proof in the pan. Bake in 350° F.

No. 2.—One pail milk and water, 6 pounds boiled potatoes, 6 quarts of ferment or 6 ounces of yeast, 7 ounces salt. Mash the potatoes while warm. Dissolve the yeast; add the water and milk, also the salt; and make a smooth dough, rather tight; set at 75° F., and keep at an even temperature. If this dough is made in the morning it will be up in about five hours; work it over again; let it rise again, then make it into loaves, pan and bake in a good heat. This should make a nice moist loaf.

No. 3.—Here is one of my old recipes which I have used for years and can recommend as tried and reliable. I have used it for French Bread and for pan bread, also for cottage and split loaves, but the dough should be made firmer for the latter two. It will also make a good crisp split roll: One pail of potato ferment, 3 quarts water, 10 ounces salt. Make a straight dough; set at 75° F. Take a good strong potato ferment; dissolve the salt in the water, and with two parts of spring and one part of winter wheat flour make a medium firm dough; work it well and pen up close. In a warm shop this dough will be up in three hours; work it over and let it come up half. Then throw out, scale and mould into loaves; prove and bake. This is best suited for the shop because a batch can be turned out in five hours without forcing it. To obtain a solid loaf care should be taken not to give full proof in baking. Sugar and lard can be used in this recipe if desired to make a richer bread.

No. 4.—Twelve quarts water, 5 ounces yeast, 1 pound lard, 12 ounces sugar, 8 ounces salt. Make a straight dough; work it well and smooth; set it at 75° F.; let it come up full and work it over; and let it come up double size; then scale, mold back, and set in pans and prove; bake in 350° F.

No. 5.—Two pails water, 1 pound sugar, 1 pound lard, ½ pound compressed yeast, 10 ounces salt. Dissolve the yeast, and make a thin batter with flour and one quart of water; let it stand for

twenty minutes in a warm place, then add the other liquid, sugar and salt; work in more flour, add the lard and finish as in the former recipe.

HOME MADE MILK BREAD.

Six ounces yeast, 3 gallons water, 1 gallon milk, 3 pounds scalded cornmeal, ½ pound sugar, 6 ounces salt. Dissolve the yeast in one pint of warm water and add flour to make a soft batter; beat it up well and let it stand in a warm place for twenty minutes; then put on the other liquid at the right temperature; add sugar, lard, cornmeal and salt, and make a medium dough. Let this dough come up full; work down and give only a little time to come on; scale and mould; put in pans and give good three-quarters proof; bake in a solid heat. This dough should be worked over very well, because the cornmeal makes it rather sticky.

HOME MADE BREADS WITH A SPONGE OF FERMENT.

Set a sponge with one pail of straight potato ferment and a good patent flour. When this sponge reaches the first drop add 1 pail of water, 1 pound sugar, 1 pound lard, ¾ pound of salt. Break up the sponge well with the sugar and salt in it; mix in half of the flour; then add the lard; mix this in well, and then add the other flour required for a good dough; work it smooth; let it come up well, and then scale, mould, pan and prove. Bake in a solid heat. A dough made out of a sponge should be made a little tighter than a straight dough because it will slacken some after it is made.

HOME MADE BREAD WITH A FLOUR FERMENT.

Six ounces yeast, 2 gallons water, 1 gallon milk, 1 pint molasses, 6 ounces lard, 6 ounces salt. Set a very slack sponge, or rather a ferment, with the water, some flour, yeast and molasses; set it luke-warm about the thickness of a griddle cake batter; beat it up well, and set to rise. When this ferment falls, which will be in about two hours or before, put on the milk, salt and shortening, and make the dough; let it come up well; work over; scale; mould back; put in pans; prove, and bake in a good heat of 350° F.

HOME MADE BREAD WITH COMPRESSED YEAST SPONGE.

Two pails of water, 5 ounces yeast, 1 pound salt, ¾ pound sugar, ½ pound lard, 2 pounds of cornmeal made into mush. Make the sponge with one pail of water; dissolve the yeast and set at 75° to 80° F., not too tight. When the sponge is ready, put on the other

pail of water with the salt, sugar and lard. If the mush is lumpy it should be thinned and forced through a sieve on the sponge. Break the sponge fine, and make a good medium firm dough; work it well, because the mush gives a wet, unfinished feel to the dough. Let it come up well; work down and let it spring on again; scale and make into loaves without moulding back; give good proof and bake in a good solid heat.

QUAKER BREADS.

The bread sold under this name is a double pan loaf, that is, two loaves are baked in one pan. In some places they are made in a long shape, and two one pound loaves are set in one square pan; others are baked in one long pan in a square shape. Other bakers use two square pans strapped together, so the loaves touch only on the top and can be easily separated and sold single. Almost every baker has a different recipe for making Quaker Bread. While some bakers use the best grades of flour for this bread, others use only the second grades. Sugar and lard are used for it by all bakers, and some add cornmeal mush, or use cornflour, and others use glucose or molasses instead of sugar.

These breads are best made with straight dough; but they can also be made by sponge process, or taken from a sponge of which other breads are made; but the dough should be taken young and should contain sugar and lard. If malt extract is used half of the sugar given in the recipes would be sufficient.

QUAKER BREAD WITH FERMENT.

One pail ferment, 1 pound of sugar or one pint molasses, ½ pound salt, ½ pound lard. Make a straight dough with a good strong patent flour; let it come up twice; scale and mold in pans; give good proof and bake in a good heat of 350° F. to 400° F.

QUAKER BREAD WITH COMPRESSED YEAST.

One pail water, 5 ounces yeast, ½ pound glucose, 2 pounds cornmeal mush, 6 ounces salt, ½ pound lard. Dissolve the yeast and glucose in warm water and make a soft batter with some flour; let it stand for twenty minutes, then thin up this batter with the other water; add salt mush and lard and make a good smooth dough; let it prove up well; work down well; let it come on half and scale and mold in pans. Give good proof and bake in a good solid heat.

MOTHER'S BREAD.

"Mother's Bread" is also baked as a double pan loaf, like the Quaker Bread. It is made by the straight dough method with sugar and lard, in about double the quantities given in the Quaker Bread recipes. The same pans are used and it is molded round, dusted slightly with flour, set in the pans so as to touch lightly, and is baked without using any wash. Three recipes are given:

No. 1.—One pail of water, 1 pound of sugar, 1 pound of lard, 5 ounces of yeast, 6 ounces of salt. Dissolve the yeast in the water; add the sugar, salt and lard and make a smooth dough; work it well and let it come up full the first time; let it come again about half; scale, mold, pan, prove, and bake in a medium heat—about 325° F. Do not give too much proof, because this bread should be close grained like the "Home-made" bread.

No. 2.—With ferment and milk—½ pail of strong potato ferment, ½ pail milk, ½ pound sugar, ½ pound lard, 8 ounces salt. Make a straight dough; take the ferment, sugar and salt and work in a part of the flour to make a thin batter; let it stand for about twenty minutes in a warm place; warm the milk and add it with the lard to the batter and make a medium dough rather tight; let it come up once, then work it over; let it come up half, and mold into loaves. Bake in a good solid heat of 350° F.

No. 3.—This is a recipe for a straight dough potato bread, without lard: Two pails of water, half a peck potatoes, six ounces of yeast, twelve ounces of sugar and one pound of salt. Boil well-washed potatoes, mash and strain through the colander, add water to make up two ten-quart pails at about 85 degrees Fahr.; make a medium firm dough and let it come up well which will take four to five hours, work over. Give one more hour, then mould and pan as usual. Give only medium proof in the pan to make a solid loaf.

COLUMBIA BREAD.

"Columbia" Bread became well known in 1893, during the Columbian Exposition. It had a good sale for some years, but did not stay in favor with the public. It was very white and fine-grained, but lacked flavor. The bread is machine-mixed and made with a very old sponge, then the dough is run through the brake or rollers about twenty times, and molded and panned at once. When the bread is molded up and has a little proof it is cut over five times, proved and baked in steam.

This is the recipe for it: Three pails water, 1½ pounds compressed yeast, 1 pound 14 ounces salt, 3 pounds sugar, 3¾ pounds lard. Set the sponge with two pails of water and the yeast. Do not have it too slack; let it get the second drop; put on the other pail of water, the sugar, salt and lard; make a firm dough; let it come on for fifteen minutes; run through the rollers twenty times; scale and mold and pan at once. Cut five times and let it prove, and then bake in steam.

SNOWFLAKE BREAD.

"Snowflake" bread is practically the same as the "Columbia," the difference is chiefly a difference in name. It is also termed "Choice" bread. Bakers who have no machinery can use hand-rollers which are not very expensive. They can be fastened to the bench with clamps, and can be taken off after using. They are made in different sizes. Here is one recipe: Three pails water; twelve ounces yeast; eighteen ounces salt; three pounds sugar; three pounds lard.

A good snowflake bread should have a fine white texture and close grain. A good flavor can be had by using a very slack sponge, but give it the second drop and take the dough young. Set a two-pail sponge (10-quart pail) with the yeast when it reaches the second drop, put on one pail water, salt, sugar and lard; make a medium dough and work it smooth; run it through the rollers twenty times; scale and mould without giving the dough much time to prove in the trough. When the loaves are all panned, cut and set to prove. Give not quite full proof and bake in a moderate heat. When turning on steam give only enough to have the cut come up smooth; then finish baking without steam.

SNOWFLAKE BREAD WITH BUTTERMILK.

One pail of water; one pail buttermilk; six ounces yeast; twelve ounces sugar; twelve ounces salt; one pound lard. Set a medium firm sponge; let it come to the first drop; put on the buttermilk, sugar, salt and lard, and make a smooth dough; let it come up half; run through the rollers from ten to fifteen times; scale and mould in pans; prove and bake in 350 degrees Fahrenheit. While the first snowflake bread is baked in long pans and cut when it is moulded, the buttermilk bread is baked in the square box mould and also under cover like the cream breads, and without steam.

SNOWFLAKE BREAD—SANDWICH LOAF.

Set a warm sponge with two pails of water and eight ounces of yeast; let get the second drop. The sponge may be set in the evening and taken in the morning, or in about twelve hours. For doughing add on the sponge one more pail of water, twenty-four ounces of salt, and the same amount of sugar, two pounds of lard. Make a firm dough and run through the roller fifteen to twenty times; scale, mould and pan at once. Give medium proof and bake in about 325 degrees Fah. This bread if baked under cover or in Pullman pans makes an excellent sandwich loaf.

NEW ENGLAND BREAD.

This bread should come under the "home-made" breads, but it is better known as the New England bread. In former years larger quantities of cornmeal were used in this bread than now, and it made a very heavy loaf. At the present time only half of the amount is used in the same batch. The scalded cornmeal increases the moisture and makes the bread keep longer than the average wheat breads, without any shortening.

One pail of water (twelve quarts), three ounces of yeast, eight ounces salt, three pounds white cornmeal, four ounces sugar. Make a sponge with six quarts of water as usual; give it a good drop; scald the cornmeal with two quarts of boiling water; add the sugar and salt; thin the cornmeal with the remaining four quarts of water, and pass through a sieve onto the sponge. Break the sponge down fine and with more flour make a smooth dough, not too stiff. Let the dough come up once, scale and mould into loaves; give three quarter proof and bake in a good heat. Both round and square tins are used for this kind of bread.

This bread is known in the South under the name of "mush bread." The process is the same, only a larger quantity of scalded cornmeal is used in it.

NEW ENGLAND BREAD WITH FERMENT.

Set a medium firm sponge with one pail of potato ferment; give the sponge a good drop, and put on the sponge one pail of water, three pounds of scalded cornmeal, one pound of lard, one-half pound of sugar, one-half pound of salt. Make rather slack dough, but work it well; let it come up only once, then scale and mould in pans, give three-quarters proof, and bake in a good heat.

NEW ENGLAND BREAD WITH STRAIGHT DOUGH.

Two gallons water; one gallon milk; eight ounces of yeast; one pound lard; six ounces of sugar; eight ounces of salt; six pounds of cornmeal mush. Make a medium dough with the ingredients, set at 75 degrees Fah.; let it prove in the same temperature for four hours; work it over and let it come up about half; mould up in pans; give three-quarters proof, and bake in 325 degrees Fah.

NEW ENGLAND BREAD WITH SPONGE (HOME-MADE BREAD).

Three gallons water; three ounces of yeast; eight ounces of salt; six ounces of lard; eight ounces of sugar; one and a half pounds white cornmeal. Scald the cornmeal and make it into a soft mush. Set sponge with two gallons of the water and yeast medium firm, at 75 degrees Fah. When the sponge is ready put on the other water at the same temperature; add the cornmeal, sugar, salt and lard; work the dough well; let it come up and work it over; give it a little time to come on again; scale and mould into loaves; give medium proof, and bake in a good heat.

OTHER PAN BREADS.

A variety of breads are often made out of one sponge. The water, sugar and lard are added after the sponge is broken up and so many dippers or pails are taken out for each kind. More sugar and shortening is added for the richer breads. In this manner graham bread, rye, Vienna and other hearth and pan breads can be made in separate mixtures out of one sponge.

PAN BREADS WITH FERMENT.

For the sponge take one ten quart pail of good strong ferment and two pails of water. For the dough take three pails of water, three pounds of sugar, two pounds and ten ounces of salt, two and one half pounds of lard. Set an eight hour sponge at seventy-five degrees F., and have the shop at the same temperature. The sponge will have the second drop at the given temperature. Put on the sugar, salt and lard, and break up the sponge; take out for the different breads. Let the dough come up for one hour and scale and mould up in loaves, prove and bake.

PAN BREAD WITH COMPRESSED YEAST SPONGE.

Two pails water, five ounces yeast, one pound salt, one-half pound sugar, one half pound lard. Set the sponge at eighty-five degrees F., with one pail of water and the yeast: give it a good drop, and add one pail of water with the salt sugar and lard at seventy-five degrees, and mix the dough well. Let it come up twice, scale and mould in pans; give good proof, and bake in 350 degrees F.

POTATO BREAD.

Five ounces yeast, one half pail milk, one half pail water, eight ounces salt, eight ounces sugar, eight ounces lard or butter, one-half peck of boiled and mashed potatoes. Dissolve the yeast in one quart of water and make a batter with the sugar and some flour; let it stand for fifteen minutes and add the other water; make into a medium sponge, let it come to the drop. Thin up the potatoes with the milk; add the salt and lard, and pass on the sponge; mix all well together, and with more flour make a medium firm dough; let it come on; scale and mould up very smooth; pan and bake in a baking heat of 350 degrees F.

CREAM BREADS, OR MILK BREAD.

There are several kinds of cream breads and there is no difficulty for a baker to make a first class cream loaf out of any kind of milk bread or Vienna dough. The ordinary roll dough can also be used for this kind of bread. The loaves are baked in the regular square cream bread pans, made with a cover to fit for one and two pound loaves. They are also known as Cream Toast Bread, and are used in many restaurants for toast only, making a square slice which requires no trimming, having a thin crust. One other kind, known as the Vienna Cream loaf, is baked in round corrugated pans, of four inches in diameter and from ten to twelve inches long. The loaves weigh about one pound and eight ounces.

This bread has a good sale as a family bread. It makes nice round sandwiches for picnics and parties. There is another way of making cream breads which does not require a special pan and is practiced in many bakeries. For this the regular pans can be used although it is best to have the pans of a rather large size. The loaf is molded up smooth like the regular pan loaf and placed on flat roll pans, smooth side up, some distance apart; about six to eight

loaves on one pan. They are covered with the regular baking tins and given a little proof. The tins are lifted and the loaves are cut either crosswise or in ribs like the corrugated loaves, the tins are replaced, the loaves given nearly full proof and baked in a medium hot oven. If a little more color is required the covers are taken off when almost done, and the baking is finished without them.

Make a cornstarch wash, dissolving two ounces cornstarch in a little cold water and stir this in one quart of boiling water; wash the bread right at the oven door, put the loaves back in the oven for a moment, just enough for the wash to dry. This gives the bread a nice finish.

A variety of breads can be made by using round covers, or adding more sugar and lard, also eggs, currants and sultana raisins.

I give a number of recipes for Cream Bread:

No. 1.—Five quarts milk, 5 quarts water, 10 ounces sugar, 1 pound lard, 8 ounces yeast, 3 ounces salt. Make a thin batter with the yeast, warm water and flour. Set to rise for twenty minutes; put on the remaining water and milk; add the sugar, salt and lard. Make a fine smooth dough; let it prove up well; work over and make into loaves and set on pans; cover; let them prove further, and cut the loaves. Cover again and finish proving and bake. Before the loaves are quite done take off the covers and finish baking to give a nice color.

No. 2.—One pail of water, 1 pound of milk powder, 1 pound of lard, 10 ounces sugar, 6 ounces yeast, 8 ounces salt. Set a slack sponge with six quarts of water and the yeast. Dissolve the milk powder in the other four quarts of water and add sugar and salt. Put this on the sponge; when it gets the first drop break up the sponge very fine, add the lard and make a medium firm dough. Let it come up well and work down again; let it come up again to about half; scale and mold in pans; prove and bake.

No. 3.—Six quarts milk, 6 quarts water, 6 ounces compressed yeast, 1-2 pound sugar, 6 ounces salt, 1 1-2 pounds lard. Dissolve the yeast, put in the sugar and salt, rub the lard in the flour and set the dough at 80° F.; have the bakeshop about 75° F. Make a nice smooth dough; mix the dough well and pen it up close in the trough; let it come up full and work it over; let it come up again and work down once more; then scale and mould back; form in loaves; prove and bake in a moderate oven.

Some other cream or milk breads are made with a tight dough, and the dough is run through the rollers like the Snow Flake bread

to get a fine grain and cut like the other cream breads. The only difference between cream and milk breads is in the treatment of the doughs; most all the cream breads are put through the rollers before molding, and baked in closed pans and under cover; this makes a thin crusted bread. The average milk bread is made from the same mixture but baked in open pans which produces a thicker crust.

PULLMAN BREAD.

This bread is called Pullman bread because it is used to a large extent on the dining cars and at many depots for sandwiches. The Pullman pan is made in single and double pans with a tight-fitting cover. The loaves weigh about two pounds and four ounces in the dough, and the size of the pans is ten inches long, and four and one-half inches square. This size of pan makes a large square slice which is especially suited for sandwiches. A good Vienna dough, and also the cream bread and snowflake mixtures, can be used for this. The dough should be medium tight and go through the rollers from ten to twelve times.

One pail of water, five ounces of yeast, two pounds of lard, one and a half pounds of sugar, seven ounces of salt. Dissolve the yeast in one quart of warm water and add sufficient flour to make a soft batter, let the batter stand in a warm place for about twenty minutes, then add the pail of water (at 80 to 85 degrees Fahr.) also the sugar and salt and more flour, then add the lard and make the dough medium firm. Let it come up and cut over twice, put through the rollers twelve times and scale, pan and prove; bake in medium heat of 350 degrees Fahr.

Hearth Baked Breads.

It is an established fact that breads baked on the hearth, on a stone oven sole, have a better flavor and are superior to breads baked on a metal surface or in tins. I think a better home made bread can be made by baking it on the hearth, either as a single loaf with a full crust, or as a double loaf like the Cottage and Irish bread. This class of hearth baked breads require a firmer dough and less proof and also a slacker oven than the pan baked breads. They are baked without steam and are not washed before or after baking.

The different breads can be made out of any of the home made doughs, and also out of the Vienna dough, straight or with a sponge, but the doughs should be made firmer.

COTTAGE BREAD AND SPLIT BREAD.

One pail ferment; one pail water; one pound lard; twelve ounces sugar; twelve ounces salt. Set a sponge with ferment and take it at the first drop; put on the water, sugar, salt and lard, and make a firm dough. Let it come up and work over, then scale and mold back. In New York, where the cottage loaf is called "High Round," the loaves are scaled in two pieces and at first are moulded round on the bench, and then they are moulded the second time and both pieces are pressed together, dusted with flour and set two by two in a long narrow box, which is laid out with cloth. The cloth is drawn up between each two, and they are set to prove. The oven is lined on the sides with wood. The bread is put in, two loaves at one time, close together, in a square shape. This requires practice and dexterity. When the loaves are all in the oven other pieces of wood are put in front of it to keep it in shape till baked.

The split loaves are made in two shapes. The Irish split loaves are moulded in the shape of a pan loaf, then they are dusted with flour and pressed long ways with a rolling-pin, like the split rolls set with the split down in the box; the cloth is

pinched up between the loaves and they are set to prove. The loaves are put in the oven like the cottage loaves, and are set close together, ends and sides touching each other. The split loaves, which are known as the French split, can be made out of the same dough; they are moulded at first in the shape of the Vienna loaf, set on the bench and given a little proof, then they are pressed in with the rolling-pin. Bakers generally use only flour, but for beginners I would advise to grease the split, and use no flour; this would insure a better split. Set the loaves split side down, draw up the cloths between the loaves, and give three quarter proof. Bake the loaves like the French bread, single, without their touching each other. All the hearth baked breads should be brushed off at the bottom, after they are baked, to remove any ashes or cinders which may have adhered to them in the oven.

COTTAGE BREAD WITH COMPRESSED YEAST.

One pail water; four ounces of yeast; five quarts milk; one half pound sugar; one half pound lard; six ounces salt. Set a slack sponge with the water and yeast as usual; when the sponge reaches the drop, add the milk, sugar, salt and lard. Make the dough medium firm; let it come up and work over; let it spring on again; then scale and mould into loaves; prove and bake. By using more yeast in this recipe, it can be used for a straight dough. In this case work in the ingredients at once.

FRENCH SPLIT BREAD.

Make a straight dough, rather firm, with one pail of ferment and six ounces of salt; use no sugar or lard; let the dough come up well and work over; give it a start; then scale and mould on the bench; form into long loaves, in Vienna shape, split, set in cloths, prove and bake.

A very nice French split is made in some Chicago bakeries out of a Vienna mixture in which half milk is used.

DUTCH BREAD.

The Dutch loaves are made out of a good solid dough; it can be made out of any of the straight or sponge doughs; it should be well baked, and have a close grain and a good flavor. While in some localities it is a single round loaf baked on the hearth, in other places it is an oval flat loaf. It is also baked in a single pan as the round box loaves.

IRISH BREAD.

The Irish bread is also a bottom bread, and in Chicago bakeries a good rich dough is used for it. It is baked in pairs; two one pound loaves are set together, so they touch each other slightly, and when put in the oven the loaves touch the other loaves on the ends, but not on the sides.

IRISH BREAD WITH STRAIGHT DOUGH.

One pail water; five ounces yeast; one pound of sugar; one pound of lard; six ounces of salt. Make a straight dough as usual with the ingredients given. Make it medium firm; let it come up and work over; let it come half, scale and mould into loaves; set in the box in cloths; dust well with flour; bake without washing, as directed in a slow heat of 325 degrees Fah.

POTATO BREAD.

One pail of water; six pounds of boiled and mashed potatoes; one half pound sugar; one half pound lard; four ounces yeast; six ounces salt. This bread can be made straight as well as with a sponge, only more yeast should be used for a straight dough. The potatoes can be boiled with the jackets on, and peeled and mashed or grated afterwards, or can be peeled before boiling. Set a sponge with half the water and the yeast and flour, not too slack. When it is ready, put on the potatoes the other half of the water, sugar, lard, and salt; make a solid dough; let it prove up once and work over; let come on, and scale and mould into round loaves; mould up very smooth, set in boxes which are dusted with flour, or on cloths; dust the loaves also on top with flour; give good proof and bake single on the hearth without washing, in a baking heat of 325 F.

This bread can be made from a larger, broken down sponge, and adding potatoes and shortening for doughing.

POTATO BREAD WITH POTATO FLOUR.

For one pail of straight or sponge dough use from one to two pounds of potato flour. The potato flour should be added to the dough in form of starch; dissolve the potato flour in cold water, and add gradually enough boiling water, stirring constantly to form a soft paste without lumps; cool and add to the dough.

TWIST BREAD.

The Twist should be classed with the Vienna breads. It is made out of the Vienna dough, which is best adapted for this

bread. The Vienna and Bohemian bakers can make this bread more perfectly and in more shapes than any other bakers. It is baked in steam, like the Vienna; washed before baking, with and without poppy seed sprinkled on the top. It is made in double and single braids and also as a short Vienna loaf with a single strand of dough on the top. The loaves weigh from one half to two pounds, and require a cool treatment in the dough. The twists are proved and then set in a cool place to stiffen up; before baking they are set in cloths like the Vienna breads.

No. 1.—Two pails of water; ten ounces of yeast; one pail of milk; one pound of sugar; one pound of lard; one pound of salt. Set a slack sponge with two pails of water, the yeast and a strong flour. Give the sponge a good drop; add the milk, sugar, lard and salt; make a firm dough; let it come up well and work over; let it come on and scale and mould into loaves; prove and bake as directed.

No. 2.—One pail half water and half milk; one pound sugar; one and one half pounds lard; six ounces of yeast; six ounces salt. Make a good straight dough, rather light; let it come up twice and work over; scale and make into twist as directed. This mixture can be made still richer, for fancy twist, by the addition of eggs and butter. The richer breads of this class are baked on pans washed with egg wash, and often sprinkled with chopped almonds and iced over with water icing.

Special Breads.

GRAHAM AND WHOLE WHEAT.

Many of the graham and whole wheat flours are made out of the poorer grades of wheat, and often the best part of the wheat is taken out by the millers; for this reason it is preferable to use from one third to one half of a good grade of patent flour with it to make good bread. All dark flours which contain more or less bran prove more rapidly than the white flours; they require less yeast, and also less proof in baking. The addition of molasses to some of these breads also accelerates the proving. Some graham or brown breads are made without yeast, baking powder or soda, and cream of tartar is used for raising, also buttermilk or sour milk and soda, soda and molasses, and also half sponge and soda and molasses, which makes a very nice and moist loaf. If soda is used, it can be used only with sour milk or with molasses which contains acid, and in the proportions of half an ounce to the quart of molasses or sour milk. Where only small quantities are made, a part of a broken-up wheat flour sponge can be used, some molasses added and graham flour used for doughing. When a separate sponge is used, take half patent and half graham flour, or all patent flour for sponge, and all graham flour for doughing. Molasses is used in the proportion of one quart to the ten quart pail; while the shortening is optional, the addition of lard makes a shorter crust.

GRAHAM BREAD.

One pail water; two ounces yeast; one half pound salt; one quart molasses; one pound of lard. Set the sponge as usual with half of the liquid and the yeast; use half graham and half patent flour; let it come to the drop; put on the other part of the water, salt, molasses and lard, and with more graham flour make a medium dough rather slack; let it come up half and work over, scale and pan. Give about three quarter proof and bake in a medium heat of 350 degrees F.; wash with water or brush with butter or lard after baking.

GRAHAM BREAD WITH STRAIGHT DOUGH.

One pail water; four ounces yeast; one pound lard; one quart molasses; eight ounces salt. Mix one third of wheat flour and two thirds of graham flour; rub in the lard; dissolve the yeast in the water; add the molasses and salt; make a medium dough, set at a temperature of 65 to 70 degrees F. Let it come up but not drop; work over; then scale, mould in pan, prove and bake in a medium heat.

GRAHAM BREAD WITH SODA AND SPONGE.

Take one pail of broken-up sponge, with the salt in it, add three pints of molasses, and one ounce of soda dissolved in water; with more graham flour make a very slack dough. When half mixed add one pound of soft lard and work the dough very smooth. Fill in pans without moulding, set to prove, give good half proof and bake in 350 degrees F. This dough should be made like a drop cake batter, and if sour milk is used in this mixture more soda should be used.

WHOLE WHEAT BREAD.

The whole wheat bread, or entire wheat, also the gluten bread, often called "Health Bread," is made like the graham bread, but less sweetening is used, and in some instances, when used for dietetic purposes, both shortening and sweetening are left out altogether.

One pail of water or half milk and water; four ounces of yeast; one half pound of salt; one pound of lard; one pint of molasses. Work the dough just like graham and give the same proof. If a lighter color is preferred, use sugar in place of molasses, one pound to the pail of dough.

WHOLE WHEAT BREAD WITH POTATOES.

One gallon half milk and half water; two ounces of yeast; two ounces of salt; eight ounces of sugar; eight ounces of lard; one pound of boiled and mashed potatoes. Grade or mash the potatoes; use the water the potatoes are boiled in and half milk to make a gallon; dissolve the yeast, add sugar and salt, also the lard, and make a straight dough rather slack. Let it come up once, then scale and mould in pans, prove and bake in a good heat; wash over when done.

BROWN BREADS.

ELECTRIC BROWN BREAD.

Twelve pounds of graham flour; twelve pounds of wheat flour; one gallon of milk; one gallon of water; one pound of lard; eight ounces of salt; one quart of molasses; one ounce of soda; one pound of baking powder. Rub the lard in one part of the flour, and mix the baking powder in the other part; mix together and form a bay in the center of the flour. Dissolve the soda in the water, also the salt, add the molasses and milk, and make a nice smooth dough rather slack. Scale and pan at once; set in a warm prover, let it come up half, and bake in a medium heat. Brush over with water or lard after baking.

BOSTON BROWN BREAD.

Boston brown bread is made in several ways. It is raised with yeast and also with soda and baking powder. The quantity of molasses also varies very much, which makes a difference in the quality. Lard or other shortening is not used in this bread. It can be baked or steamed. If baked, the baking should be done in a cool oven of about 200 to 250 degrees F. It is best to set the moulds in a pan with about one to two inches of water in it, to prevent browning too much on the bottom. In some bakeries a tin box is used, a little higher than the brown bread moulds, large enough to hold a dozen moulds, with a tight fitting cover. The bread is set in, the box filled half full with boiling water, the cover put on, and put in the bake oven and the bread is steam-baked for three hours. About the time the water is boiled off the bread is done.

YEAST RAISED BROWN BREAD.

Two pounds rye; one quart molasses; two pounds cornmeal; three ounces salt; two pounds graham flour; two pounds wheat flour; two ounces yeast. Make a soft sponge with the rye flour, and one quart luke warm water, scald the cornmeal with one quart of boiling water; let cool, and when the sponge is ready mix in the molasses and salt and the other flour; use a little milk and mix into a soft dough; divide into loaves. This mixture makes about one dozen. Grease the molds, put in and let rise to three quarter proof; bake or steam for three hours.

BOSTON BROWN BREAD WITH SODA.

One pound rye; two pounds cornmeal; one pound graham; one quart molasses; one pound wheat flour; three pints milk; two ounces salt; one ounce soda. Mix the flours together, dissolve the soda in the milk, make a bay and mix all the ingredients into a soft batter like drop cake, add more milk if needed, fill in greased moulds, and bake or steam for three hours.

BOSTON BROWN BREAD WITH BAKING POWDER.

Two pounds cornmeal; one pound rye; one pound wheat flour; one pound graham; two ounces salt; one pint molasses; three ounces baking powder. Scald about half of the cornmeal and let it cool. Mix the baking powder in the other flour, put in salt and molasses, and with milk or water mix into a slack batter; fill in well greased molds and steam or bake for three hours.

Lately there have come into the market some ready-made self-raising brown bread flours. The flour is mixed with even quantities of milk or water and molasses into a soft batter like the other brown breads, and steamed as usual. Stale cake crumbs can be used up in brown breads. Raisins and currants may be added for variety.

HEALTH BREADS.

One of the vegetarian fads is the nut breads. Gluten flour and whole wheat flours, combined with ground nut meats, make an ideal loaf, very nutritious and of fine flavor. Peanuts, walnuts and all the other varieties are used for these breads. Walnuts, and hickory nuts are best used raw, while a better flavor is obtained of peanuts if they are slightly roasted. The nuts should be grated or chopped very fine; if crushed in a mortar or passed through rollers the nuts seem to lose some of the oil or fat which they contain, and this causes loss of flavor.

NUT HEALTH BREAD.

Four pounds of gluten flour or whole wheat flour; two pounds patent flour; three ounces yeast; one pound of walnut meat, chopped fine; one-half pound of cocoanut butter; four ounces sugar; one ounce salt; one quart water; one quart milk. Set a very slack sponge with one quart water; yeast and the patent flour. When the

sponge is ready add the sugar, salt and milk, and work into a medium dough with the gluten flour. Use more water or milk if required to make a nice, smooth dough. Add the softened cocoanut butter and the nut meats. Let the dough come up and work over, give a little time to come on again, scale and mould into loaves, bake in oval or in the ordinary bread tins in a moderate heat.

NUT BREAD, NO. 2.

Six pounds of entire wheat flour; two pounds patent flour; two ounces salt; one pint New Orleans molasses; three quarts of milk; two ounces of cream of tartar; one and one-quarter ounce soda. The peanuts should be roasted and the brown skin rubbed off in a sieve, or blanched like almonds in hot water, dried and roasted, ground or chopped fine. Sift the cream of tartar in the patent flour, mix both flours and the nuts together, dissolve the soda in the milk. make a bay in the center of the flour, put in the molasses, salt and milk, and mix into a slack dough; mould into loaves, put in long narrow pans, and bake in a good heat of 350 degrees.

The same mixture may be raised with yeast, leaving the patent flour out, take four pounds of white sponge, and thin up with milk and work in the entire wheat flour and nut meat. Add one quarter of an ounce of soda to the milk, to balance the acid in the molasses, and, of course, leave out the cream of tartar and the other soda. Prove and bake like the other breads.

OATEN BREADS.

Bread from oatmeal can be made after the same methods as the graham breads, by adding a stronger patent flour. Oatmeal deteriorates with age, and acquires a bitter taste when it gets old. The meal should be finely ground for this purpose. Some bakers prefer scalding the meal to make it mellow. The rolled oats have also been tried with success by soaking them some time before using. Like the other breads which contain bran, it ferments much quicker than the white bread, and for this reason a short fermentation gives the best results in making this bread. A much better flavor is obtained by using sugar or glucose instead of molasses, and if a part of the meal is scalded it makes a very moist loaf. Too much scalding is apt to make it heavy; and the fine ground meal is better used without scalding.

OATEN BREAD, NO. I.

Four pounds patent flour; four pounds graham flour; four pounds oatmeal; two quarts water; two quarts milk; one-half

pound glucose or eight ounces sugar; eight ounces lard; two ounces salt; two ounces yeast. Dissolve the yeast in the water, add the glucose, and with the patent flour make a slack sponge. When the sponge is ready, add the milk and salt, also the lard; work in the graham and oatmeal and make a slack dough; add more milk or water if required. Set away to prove up once and work over; scale and mould into loaves; pan and give only medium proof. Bake in a solid heat of 350 degrees. Brush over with butter or lard when done.

OATEN BREAD, NO. 2.

Take ten pounds of white bread sponge; one quart milk; four ounces sugar; four ounces lard; four pounds of oatmeal; one and one-half ounce salt. Work the ingredients into the sponge to make a smooth dough. Let it come up once; scale and mould; prove and bake like the other breads.

CORN BREADS.

A variety of breads are made in the Southern states in which the cornmeal is used in the form of mush; that is, the meal is scalded with boiling water. These breads should be made of a medium slack dough, treated cool and not given much proof in baking. The mush makes the bread very moist, but it should not be sticky in cutting, which happens if the dough is too slack, or it is not baked enough. The bread is best if it is baked in a pan with a cover on, and in a medium heated oven.

NEW ORLEANS CORN BREAD, YEAST-RAISED.

One pound white cornmeal; four ounces lard; three pounds patent flour; one ounce yeast; two ounces molasses; one-half ounce salt. Set a warm sponge with one pint of water, molasses and yeast and a part of the white flour. Scald the meal with one pint of boiling water into mush, and mix in the lard and salt; let cool, and when the sponge is ready put the mush and one pint of milk or water on to it; make a medium dough; set it to rise; let it come up and work over; scale; mould into loaves; pan and give good half proof. Bake in medium heat.

BUTTERMILK CORN BREAD.

Two pounds white cornmeal; six ounces lard; two pounds white flour; one-half cup molasses; one-half ounce salt, one quart of buttermilk; four eggs; one ounce of soda. Scald half of the

cornmeal with one pint of boiling water; add the lard; dissolve the soda in some water; thin up the scalded meal with the buttermilk; add the eggs and flour, and make a slack dough like a tea biscuit mixture; shape into loaves. Set in pans and bake in a good heat.

The foregoing breads should not be confounded with the regular family cornbread of the Southern states, which is not sold very often in bakeries, because it is good only when fresh made and while warm. I believe it could be made successful and find a ready sale in bakeries which have a lunch trade, or are connected with restaurants. This cornbread is delicious if eaten fresh, and everybody likes it. It can be kept in a good condition in a moist heater for several hours and sold with a good profit.

This cornbread is made different from the yeast-raised breads named before, it contains no wheat flour and no sugar or other sweetening, it is made from cornmeal only. It is often made with sour milk and soda, and also with sweet milk and baking powder. The sour milk is considered to make the best flavored bread. The sweet milk and baking powder process is the most reliable to obtain uniform results The white cornmeal is the best, because the yellow meal often has got a bitter taste and is not liked for this bread. The Southern people prefer the country-ground meal, which is very coarse ground, with lots of bran in it, which is sifted out before using. Beside the country meal are two other grades of meal which are used, the plain medium-ground meal, and a very fine ground meal called cream meal.

All the different kinds may be used with success. The coarse meal requires more scalding than the fine ground meals, and this matter needs the most attention to make this bread. Cornmeal absorbs much water, and the mixture must be made very soft—as thin as soup—and the baking should be done in a brisk heat. Insufficient scalding, slack heat and a too thick batter causes the bread to crack on the top instead of having a smooth crust. The cornbread bakes best in small square pans, about eight to ten inches square and with a rim of one and one half inches high. Deep-layer cake tins, and deep custard pie tins, are also very convenient for this bread. By baking the bread in this way it can be cut in quarters or sold whole.

SOUTHERN FAMILY CORN BREAD.

Four pounds white cornmeal; two quarts boiling water; three pints milk or water; twelve ounces lard; one-half ounce salt; eight eggs; four teaspoons baking powder. Put the meal into a dishpan

or in the mixing bowl; make a bay on one side; take the boiling water and scald about half of the meal; put on the lard and mix in; also the salt and set aside to cool; when the mush is about lukewarm thin it up with the milk; add the baking powder the last thing, and beat it up well. Take a dipper and fill the mixture in the well-greased pans; put in the hottest place in the oven at first, till the top is formed and baking up even, then move to a cooler place to finish baking. Cut each pan in quarters and split each piece through the center while hot and spread fresh butter between. You will have a cornbread fit for a king.

MISCELLANEOUS.

RICE BREAD.

Rice flour is used in bread in the same manner as the cornmeal; the flour should be not only scalded, it should be boiled into a starch. Wet the flour with cold water into a paste and thin up with boiling water, then return to the stove and boil for a minute to get clear. If whole rice is used, take the rice and boil it till soft, then strain off the water and rub through a sieve before using. For the shop there is a better way and more convenient, that is to bake the rice; put one pound of rice in a pan which holds about one gallon of water, fill the pan nearly full of water, cover and set in one corner of the oven. The rice will soften and get ready to pass through a sieve in about one hour. One formula is given here:

Two quarts water; 2 ounces yeast; 3 pints milk; 2 ounces salt; 4 ounces sugar; 4 ounces lard; 1 pound of rice flour or whole rice. Set a sponge with the water, yeast and some strong flour; prepare the rice and when the sponge is ready pass the rice on the sponge through a sieve; add the milk, salt, sugar and lard, and with more flour make a medium dough; let it come up and work over, let it come on a little scale, pan and prove, and bake like the other breads.

FANCY FRUIT BREAD.

Two quarts of milk; 3 ounces of yeast; 1 pound butter; 1 pound sugar; 5 whole eggs; 5 yolks; 1 pound sultana raisins; ½ pound chopped almonds; ½ pound citron; 1 ounce salt; lemon extract; mace. Set a warm slack sponge with the milk, yeast and some patent flour. When the sponge is ready add the sugar, butter, eggs, salt and flour. Work this in the sponge with more flour and add

the fruit. Let it prove up once; work it over and scale and mould in bread or cake tins. Prove and bake in a medium heat. Ice with a vanilla icing. The loaves may also be washed before baking with an egg wash and sprinkled with almonds.

From the same mixture other fancy breads may be made by leaving out the fruit and adding seeds to make a fancy seed bread or cake.

SULTANA (SEEDLESS RAISIN) BREAD.

One quart milk; 2 ounces yeast; 4 pounds flour; ¼ lb. butter; ½ pound sugar; ½ ounce salt; 5 eggs; 1 pound sultanas, or seedless raisins. Set a sponge with the milk, yeast and some flour; rub the sugar, butter and eggs to a cream, and add to the sponge. When ready, and with more flour make a medium dough and work in the fruit. Let it prove up once and scale into pieces to sell at five or ten cents each; put in square or oval tins; give good proof and bake to a nice brown. Currants or nuts may be used and almonds sprinkled in the tins before baking. Other fancy breads may be made from plain bun and cake doughs, baked plain round on pans, also in different shaped tins.

Another way is to bake them under covers like the cream breads and score the tops in fancy pattern. The best grades are made rich, like the French brioche mixtures, while the ordinary kinds may be made from plain bread doughs with a small addition of fruit and shortening.

CHEAP FRUIT BREAD.

Twenty-five pounds bread dough; 12 ozs. lard; 12 ozs. sugar; 3 pounds of raisins. Work the ingredients into the dough as usual, and make up into loaves. Changes may be made by using currants or sultanas, and adding eggs or some egg color, a cheap grade of California raisins and chopped peel or cocoanut. This will also make a hock dough for buns and coffee cake.

FRUIT BREAD WITH MOLASSES.

Ten pounds roll dough; 1 pint N. O. molasses; 1½ pounds currants or raisins.

COCOANUT BREAD.

Ten pounds sponge; 1¼ pounds sugar; 1 pound lard; 1½ pounds cocoanut. Work the ingredients into the dough or sponge, adding more flour to make a smooth dough. Scale in five or ten cent

pieces; mould round on pans or set in bread tins; wash over before baking, and bake in a brick oven.

SOUTHERN FRUIT BREAD.

Set a sponge with 1 gallon of water and 3 ounces of yeast; or bake 20 pounds of white sponge. When the sponge is ready work in the following ingredients: 2 quarts molasses; 1 pound lard; 3 pounds currants or cheap raisins; 3 ounces salt; 2 ounces of allspice. Add more flour to make a medium dough; let it prove up once and work over; scale in pieces to sell at five cents each; mould round; set in round bread tins and let prove up half; give a cross cut; wash over and finish proving. Sprinkle on each loaf a little granulated sugar in the center, and bake in a medium heat.

Another way is to divide each loaf into six pieces; mould in ovals and set in long bread tins, or on pans and bake so they touch in baking. They are sold the whole loaf for five cents and in single pieces for six cents.

FRUIT BREADS WITH BAKING POWDER.

Six pounds of white flour; 5 ounces baking powder; 2 quarts of milk and water; ½ ounce salt; 6 ounces sugar; 12 ounces butter and lard; 6 eggs; 1 pound of fruit; a litttle lemon extract Take half patent flour and half cake flour sift in the baking powder. Cream the butter, sugar and eggs, add 3 pints of milk and mix in the flour, then add the remaining pint of milk and the fruit; make a smooth dough; mold into loaves; put in tins and set in a warm prover to loosen up a little; then put in the oven and bake in a medium heat.

SALT RISING BREAD.

One of the most important points to be looked after in making salt-rising bread is heat. It must have heat from start to finish. Have a good light prover; put a small gasoline stove in the bottom of the prover, with tank on the outside, that will make it much handier, as it can be filled at any time and will be perfectly safe from fire. Put three ounces of fine cornmeal and one quarter teaspoonful of soda in a quart bowl. Put one pint of milk and half a cup of water in a basin and bring to a good sharp boil. Pour this on your meal and soda—not too much at a time, stirring well all the time, so it will not be lumpy; this will make a very thin batter. Now put your

bowl in a box just large enough to hold it nicely. Cover it up well with a bag and set it in a warm (not hot) place to rise. It will take from twelve to fourteen hours. The oven plate is a good place to set it to rise; or if your oven is enclosed set it in the sand on top of the oven. The heat must be just warm, but constant. When your yeast is light take your dishpan, put in three or four pounds of flour, pour your yeast on the flour, and stir in with a large spoon. Now add two and one-half quarts hot water (not scalding) and make a thick batter. Set this in the prover over the gasoline stove, cover it over; keep it good and warm, but don't get it hot enough to scald. This will be ready in about one hour. When this sponge is light add three ounces salt, four ounces sugar, lard to suit, two and one-half quarts hot water and flour to make a firm dough. Cover up; set back in prover, and let it get a good start in the dough. This will take about twenty minutes or half hour. Throw out on the bench, work well and pan at once. Place in prover; cover over with a cloth or bag; place a pan of hot water on the gasoline stove, so the bread will get steam and keep moist. This bread must not be proved as light as yeast bread. If overproved it will spoil both the grain and flavor. It should never be proved light enough to crack on top. The oven should bake it in twenty minutes. The above will make twenty-five loaves. In warm weather the same amount of yeast will work fifty loaves. Canaille or fine middlings can be used in place of cornmeal, but it does not give the same flavor. Care should be taken in the kind of milk you use. Milk from one cow is best; that is, milk that is not mixed, or from a new milk cow. Now this is the arrangement I have made for working large batches: Have the trough you are to use lined with galvanized iron. Leave space of about three inches between the bottom of the trough and the galvanized iron for steam. Now take a large can (a lard can will do) and have the top soldered on tight; have an arrangement on the top of your can that you can fasten a hose to. Let the hose run from the can to the bottom of trough; have also a coupling on the bottom of the trough to fasten the hose and a hole through the bottom of trough for the steam to enter; fill the can part full of water and set it on your stove or furnace. When this boils it will force steam under the sponge and dough and keep them warm as required. Note that less heat is required for large batches.

Vienna Breads.

To make a good Vienna bread it is necessary to have an oven which holds steam. Some bakers have ovens specially built for Vienna bread where the steam cannot escape. The steam forms a coat of moisture on the loaf when it is put in the oven, gives the dough time to expand and forms the fine glazed crust for which the Vienna breads are known. Good milk bread recipes will make an acceptable Vienna bread if given the proper treatment in the sponge and dough. One-third part of milk is used for Vienna bread, but many bakers use sugar and lard only; others leave out the milk during the hot months for fear of getting sour bread.

VIENNA BREAD WITH A SHORT SPONGE.

Two gallons water, 1 gallon milk, 4 ounces yeast, 6 ounces salt, 8 ounces sugar, 8 ounces lard. Dissolve the yeast in one pint of warm water, and with some flour make a soft batter; set aside for twenty minutes, and then add the two gallons of water and more flour to make a slack sponge; beat it up well, and let it get the first drop at a temperature of 75 degrees to 80 degrees F.; the sponge will be ready in two hours. Put on the milk at the same temperature, with sugar, salt and lard, and work into a smooth dough, medium firm. Let the dough come up well and work it over; let it come on again; scale, mould and form into loaves. The moulded loaves are set to prove in cloth-lined boxes which are dusted with flour. The cloth is drawn up between the loaves to prevent them touching each other. The loaves should be prevented from getting a dry skin during the proving, because this would cause a dull-looking crust in baking. Give good three-quarters proof; put on the peel by means of a thin board on which the loaves are turned over from the cloth, give three slanting cuts and bake on the hearth.

The oven should be filled with steam before the loaves are put in, and the steam should be kept at an even pressure. The shape of the Vienna bread is well known. It is usually made in one-pound

loaves. If the oven holds steam, the loaves are cut and put in the oven without washing, and no washing is required when the bread is baked. But if Vienna bread is baked without steam, it is cut and washed with water as it goes into the oven and with a thin cornstarch wash when it is baked. If a thin egg-wash, is used before baking, the bread requires no washing when baked. Steam makes the best crust and produces a good bloom.

VIENNA BREAD WITH SPONGE WITHOUT MILK.

Three pails water, 18 ounces salt, 2 pounds of lard, 2 pounds of sugar, 10 ounces yeast. Set a sponge with two pails of the water at 80° F.; let it get a good drop, then add the other pail of water at 75° F. or 80° F.; put in the sugar, salt and lard and make a medium dough; let it come up and then scale and mould in box to get a little more proof; then form into loaves; set in cloths; give good proof; bake in a good solid heat.

VIENNA BREAD WITHOUT SUGAR OR LARD.

One pail water (10 quarts), 1 pail milk, 12 ounces salt, 12 ounces yeast. Dissolve the yeast; have water and milk at a temperature of 75° to 80° F.; shop and flour at the same temperature; add the salt to the water and make a medium firm dough. The dough should be mixed very smooth and dry. It is best in mixing to draw in one-half of the flour and work it in and then add the rest of the flour required to give the right tightness to the dough. To mix this way is a little more troublesome than taking the flour all at one time, but assures a good dough. When the dough is mixed pen it up; it will be ready to be worked over in two hours; let it come up again; scale and mould in boxes; then form in loaves; set in cloths and prove; bake in a moderate heat, from 325° to 350° F.

VIENNA BREAD, STRAIGHT DOUGH WITH FERMENT.

One pail ferment (10 quarts), 5 quarts of milk, 8 ounces sugar, 8 ounces lard. Make a medium firm dough with a good patent flour and the ingredients given. Work it over twice and make into loaves like the other Vienna breads.

French Breads.

The breads made in France, especially in Paris, are different from the American made article. They are dark in color, light and flaky with a slight sourish taste; the loaves are long and slender, the crust rather hard. In some parts of France there is also a large round loaf, made more like the American half-rye bread, but flat, and flour-dusted before baking. The long loaf weighs about two pounds, while the round loaf weighs four pounds and more. The French bread of today is not at all genuine French; a large part of it is really a Vienna loaf, it is made with the Vienna process, only in the large loaves the milk is left out. The original French bread is raised with what we would call a continued sponge. No yeast is used; only the fancy breads are made with yeast. They used to consist of brioche, a dough with plenty of eggs in it, and of which large and small fancy rolls were made, and some other plainer rolls, raised with barm or stock yeast.

About thirty years ago some Vienna bakeries were established in Paris. As the fame of the Vienna breads spread over all Europe, some good bakers were secured direct from Vienna, and since this time the Vienna bread has gained in favor from year to year. In some bakeries they make only bread, and make the original French; others make both kinds, and also the fancy breads, the "pain de luxe" as it is named. The old barm and stock yeast has been gradually replaced by the stronger distillers' yeast. I will give the recipe used in France, in the hope that some bakers here will give it a trial on a small scale, and make a loaf of genuine French bread. Instead of using yeast the start is made with a piece of dough about three pounds, which is left for this purpose from the day before. This leaven is called "levain du chef," or in short "chef"; this is made fine in three quarts of water, and with additional flour worked into a medium fine sponge. In a couple of hours this is ready. As soon as it begins to drop, with six more quarts of water the sponge is broken fine, and more flour added.

This sponge should be worked good and smooth, and a little slacker than the first sponge. This is the "levain premiere." While this is raising, the oven is heated, and when the sponge begins to drop from twelve to twenty-four quarts of water with the usual amount of salt (from six to eight ounces to twelve quarts) is put on the sponge, the sponge broken fine and worked into a good smooth dough. One-third of this dough is put aside and panned up. This is the second sponge for the next batch of bread. The remaining dough, after letting it come up for about ten minutes (given a start), is scaled right out of the trough, molded into loaves at once, put into long cloth lined baskets, the shape of the loaf. It is given about three-quarters proof. The oven has been swabbed out by this time, the loaf is turned upside down onto the peel, given three or four slanting cuts, put in the oven onto the hearth, and baked to a nice light brown color.

As the French flours are mostly winter wheat flours, and perhaps stronger than the American soft winter wheats, I would advise the use of one part spring and two parts of winter for a trial. The weaker flours would require a younger treatment of the sponges, not too warm, and the dough should not lay too long, say from ten to fifteen minutes—no more. The old dough used for the start, should either be put in a pail and one quart of cold water put on or more flour worked into it and rolled up into a cloth, well floured, to keep it from getting too sour. As we do not have the baskets it will do just as well to set the moulded loaves in cloth lined boxes, like the Vienna, and pinch the cloth up between the loaves. It is my belief that a loaf made with compressed yeast with a soft sponge, or a straight dough will make a more palatable bread, but it is well to give the recipe a trial.

CHICAGO FRENCH BREAD.

Make a sponge as usual with six ounces of compressed yeast and three gallons of water at a temperature of 75 degrees F. Let this sponge get ready to the drop, dissolve eighteen ounces of salt and twelve ounces of sugar in three gallons of water at the same temperature, and make a good medium firm dough; let it come up to double size; work down again and let it come up half; then it is ready to be scaled and molded into loaves. Set the molded loaves into cloth-lined boxes, dusted slightly with flour, smooth side down like the Vienna breads; give about three-quarter proof, turn smooth side up onto the peel, give from six to eight slanting cuts, wash

with water and bake on the hearth in a baking heat of about 450 degrees F. Wash again with water or cornstarch wash before withdrawing from the oven when baked. Many bakers do not make a special dough for the French bread. They use either the Vienna or the other pan bread doughs for this purpose.

NEW YORK FRENCH BREAD.

While in the western part of this country only the long, slender loaves are known as French bread in the Eastern States, and especially so in New York, the French bakers make several kinds—two kinds of long loaves (jocos), which sell at five and ten cents, and the long split loaf. The large long loaves are more than two feet long, and the split loaves about eighteen inches long. They weigh two pounds, one and one-half pounds and one pound. In New York city some of the French bakers are making their own stock yeast and others use compressed yeast to stock the ferment with. In most places a sponge is set with ferment and very few are using straight doughs. This is the recipe:

With one twelve-quart pail of good strong ferment set a medium sponge at 75 degrees F. This sponge will be ready in about three hours and begin to drop; to this sponge add one pail of water at the same temperature, with twenty ounces of salt dissolved in it; break the sponge very fine and make a medium dough, rather slack than tight, but work it well. Put it up close in the trough and let it come up for one hour, then scale and mold into the box, and when all have been scaled, begin to mold into loaves set in cloth, the smooth side down. Pinch up the cloths between, and when proved put onto the peel; wash with water, give four or five cuts and bake on the hearth. Wash again when baked.

The split loaves are made out of the same dough. They weigh one and one-half pounds, and sell at eight cents. After the loaves are scaled and molded round in the box or on the bench they are formed into long loaves, Vienna shape. Some flour is dusted on the bench and the loaves are set aside till all are molded. They are then slightly dusted with flour and some baker's grease, then with lard, and, commencing on the first ones molded, they are pressed along the center with a rolling pin about two feet long and about two and one-half inches in diameter, just like the split rolls. Then they are set in cloths, split side down, and finished proving. They are given about three-quarters proof, turned split side up onto the peel, put into the oven and baked without washing. This

makes a nice light and crusty loaf, which is preferred by many because the crust is more brittle, not being washed.

Some of the French bakers use the same process of sponging and doughing like in the description given above, but add to the dough a piece of dough left from the previous batch, say from six to ten pounds, for the purpose of giving age to the dough in a shorter time. French breads should be baked not only till done, but baked till the crust is hard and crisp. Plenty of crust is one of the essentials of a good French bread.

Another kind of bread which is well liked in restaurants and hotels and is also named French bread, but which is more of Italian origin, is made with a very soft sponge and dough. The usual quantities of yeast and salt are used, a very slack sponge is set, and the dough is made very soft, so soft that it seems almost impossible for bakers not used to it to handle it. The dough should be worked thoroughly till it comes off the hands, given time to prove up once then it is scaled and molded into one-pound loaves, long and narrow like the French breads. The loaves are set in heavy floured cloths, pinched up like the Vienna, and flour is dusted on the tops to prevent sticking to the cloths. The loaves are given good proof, turned onto the peel and baked on the hearth without washing.

In old recipes for French bread no milk or sugar and lard is used; but lately the tough-crusted, all-water breads are more and more giving way to the short-crusted breads which find more favor with the public. Some bakers make the French breads out of the Vienna dough only in the shape of the long narrow French loaves. The bread is baked in steam, like the Vienna, only more crust is given in baking. French bread is made in one and two pound loaves. The pound loaves are made about twelve inches long and three inches in diameter and given four cuts before baking; and the two-pound loaves are about two feet long with from six to eight cuts. In many bakeries the French breads are baked in steam, like the Vienna breads, but with a thick crust. For the split loaves it is better to have the dough a little older than for the long loaves.

French Bread No. 1.—One pail water, 1 pail milk, 8 ounces yeast, ½ pound sugar, ½ pound salt. Set a sponge with the water, sugar and yeast; let it drop and then add the milk and salt; make a medium firm dough, and work it well; let the dough come up full and work over; give it a good start and mold into loaves, prove and bake.

French Bread No. 2.—Two pails water, ¾ pound of yeast, 1 pound sugar, 1 pound salt. Set a medium sponge at 80° F., with one pail of water and the yeast. When the sponge is ready put on the sugar and salt and make a slack dough. Beat the dough well in, mixing, but have it on the slack side; let it come on once, throw out and scale in one pound loaves; make them long and narrow like the other French loaves. Set the molded loaves in very heavy dusted cloths; draw up and dust on top; give three-quarter proof; put on the peel without washing or cutting the loaves, and bake very crisp in a good heat. This is not a regular French bread, but it is a specialty in some Chicago hotels. It does not look very nice, but it is very good to eat.

FRENCH BREAD WITH FERMENT, WITHOUT SUGAR OR LARD.

One pail of ferment, 1 pail of water, 10 ounces salt. Set a medium sponge at 75° F., give a good drop, then add the other pail of water at the same temperature; add the salt; have the flour and shop also at 75° F. or 80° F.; make the dough medium tight, so that it molds well; let the dough come up well; work it over and give it a little time to prove; scale and mold into loaves; give good proof before baking, and bake in good heat, from 350° F. to 400° F.

FRENCH BREAD WITH A SHORT SPONGE WITH COMPRESSED YEAST.

One pail of water, 2 quarts milk, 1 pound lard, 8 ounces yeast, 6 ounces salt, 4 ounces sugar. Make a very slack sponge (luke warm) with the water, sugar and yeast; beat the sponge up well and let it rise. It will come to the drop in about two hours. Then put on the milk and salt, add the lard and work in enough flour to make a medium dough; work it well till it comes off the hands; let it rest for half an hour, then scale and mold into loaves, prove and bake

Rye Breads.

There is a large consumption of rye bread in America, and the demand is increasing from day to day; but very little is said in journals devoted to the baking trade about rye flour or rye bread, and its value in nutriment and edibility in comparison with wheat flour and wheat bread. Many claim the acid it contains is an aid to digestion, and it is in consequence healthier than wheaten bread raised with yeast.

In Germany, Austria, a part of Russia and some other countries, rye bread takes the place of our wheaten bread as the staff of life. It is not always pure rye bread, as in many places the darker grades of wheat flour are used in blending, to give more strength to the weaker rye flours. The best rye breads are made in Southern Germany, Bohemia and Austria, and the breads are raised with sour dough. The methods differ in almost every city. At Vienna the rye bread is made about as follows: In a large round tub about three feet high by four feet diameter, a soft sponge is made with three pails of water and half a pail of liquid sour dough; the flour is worked in by means of a long wooden paddle. This is fermented for about two hours, then one more pail of water is stirred in with one pound of salt and from six to eight ounces crushed caraway seed and fennel. The sides of the tub are scraped down and the contents are put into the trough and worked with more flour to a medium stiff dough. The dough is given a little time to prove, then is scaled, molded in round loaves, put in shallow wicker baskets, face down, proved, turned over on the peel, washed before putting in the oven, and baked. The use of these baskets admits of a softer dough being used, and it makes a lighter loaf. In southern Germany, also in Austria and Bohemia, a shallow basket is used, with a firmer dough, and in some parts the bread is molded and put on a heavy floured board, washed over several times, till it is ready to put into the oven.

Further north, in Leipsic, Saxony, a rye bread is made with a full soft sponge and very little or no salt at all. At first a sponge

is made of one pail of water and about ten pounds of sour dough; this is called "grundsaur." When this is ready three more pails of water are put on and with more flour worked into a soft sponge called "vollsauer." This sponge when it is up even is made into a medium dough (for the smaller loaves a softer dough is used than for the larger ones). The dough is scaled, molded and put in round or long baskets, deeper than the ones used in Vienna. The loaves weigh from one to ten pounds; the two, four and six pound loaves are mostly in demand. The baskets and also the peels used for putting the bread into the oven are of different sizes, according to the loaves. When it has proved, the baskets are taken to the oven, turned upside down on the peel with a slight knock, the loaves are washed with water, the initials of the baker and the weight stamped on and baked.

In some cities there is a local bread law, the price of the bread is regulated by the city council according to the price of flour; the bread is sold by the pound. The bakeries are visited by inspectors and the loaves are weighed from time to time, to enforce this law. Two grades of rye bread are sold in most of the places; the difference is from one to two pfennig per pound (the pfennig is a fourth of a cent).

At Hamburg and Bremen several kinds of rye bread are made: First, the coarse rye bread here called "pumpernickel," then the half fine bread and fine bread. The pumpernickel is made from rye meal with all the bran in it, and the fine and half fine bread of the bolted rye flour. The pumpernickel is raised with sour dough, while the others are raised with a little of the sour dough and compressed yeast. Generally only two batches of bread are baked in one day in most of the bakeries, first the fine and half fine bread and then the pumpernickel. Peat is used for fuel. In the evening the oven is filled with the quantity required for heating and the sponge is set to be ready in the morning. The fire is lit in the morning and the doughs are made.

As the process the molded loaf has to go through before it is baked is very peculiar, and is only used in North Germany, it will be of interest to give a description of it. The process is called "casseling" or "gerstling." After the dough is scaled the burning coals are drawn to the forepart of the oven and divided on both sides about two feet apart in two long heaps. Two boards, about eight feet long, ten inches wide and one inch thick are brought into use, the wet cassel and the dry cassel; one is kept in water in a long, nar-

row trough, the other is dry. The bakers begin molding, and one puts the loaves, after being washed, on the wet board. When the board is filled it is pushed into the oven between the two fires, the heat forms a thin, elastic skin and small blisters, then the board is drawn out, the loaves taken off and put with the upper dry side down on the dry board, pushed back in the oven, and as soon as evenly blistered taken out and put on other boards to finish proving. The round loaves are cut across and the long loaves slightly on the sides. This process is continued till all the bread is molded. When the loaves have proved the fire is withdrawn and the bread baked. This treatment keeps the loaves in shape, prevents breaking, and in baking gives a lighter color to the crust, and as all the long loaves are put close together in the oven, in brick shape, it prevents them from adhering too much.

All German rye breads are raised with a leaven called sour dough; that is a piece of sour dough is kept over from the previous batch, to start the next. Sour dough has to be treated as carefully as stock yeast and ferment to prevent it from getting too old, because after the sour dough has reached its maturity and fermentation is not checked it gets putrid, loses strength, and makes bad bread. If rye bread is not made every day it is best to keep the sour dough covered with water in a cool place, or freshen it up with more flour and water to keep it in good condition. In Germany bakers sell sour dough to the public just as yeast is sold here.

All rye breads are hearth baked, and bakers not used to handle rye flour often fail to turn out a good bread because they work it like wheat flours. Rye flour is a weak flour and has not the strength of the wheat flours, it should be treated cooler, given less proof, and it requires also a stronger, quicker heat for baking; for this reason rye bread is always baked in the first heat before the other breads. When a rye dough is made it should be given just enough time to spring on; that is, when it begins to show life again, then it should be scaled, molded and given about half the proof that is given to wheat breads. Some rye flours contain the darker grades of wheat flour, and of course stand more proof.

Many bakers prick the rye bread before putting in the oven with a piece of wood like a pencil, others punch a hole in the center with the finger; this is to prevent blistering in the quick heat, and also to prevent breaking out on the sides, which a cool, young dough, exposed to a quick heat, often does. An old German baker's proverb says: "Kalt und weich macht den bäcker reich, warm und trocken

bringt ihn auf die socken." That means in plain English: "A cool and soft dough makes the baker rich, but a warm and dry dough makes him poor." This old saying holds good yet, and if followed will bring money in any baker's pocket.

There is no more difficulty in the making of rye bread than there is in the making of any of the breads made out of wheat flour, and any good baker can make it after several trials, if close attention is paid to the recipes given. There is a great difference in the rye flours; no two of the brands are alike, and for this reason they work differently. Bread made out of all rye, and with sour dough only, is almost too heavy for the American taste. The addition of wheat flour, and only a small quantity of sour dough with compressed yeast or ferment, makes a lighter and larger loaf which finds more favor and sells better. For this reason I think it is the best way to make rye bread. Many bakers make several kinds of rye breads, full rye bread and half rye bread, rye bread with and without caraway seed. For the half rye bread, which is made without sour dough, and often without seeds, a sponge is set with wheat flour and yeast, and rye flour is used for doughing. It is baked in the shape of the Vienna loaf. The full rye bread is raised with yeast to which some sour dough has been added. There are some people who do not like caraway seed, and for this reason some bakers add it only to a part of the dough, or put it in during the molding process. This gives a choice to the consumer.

Rye bread is made in round and in long loaves. The long loaves are often drawn in cloths and set in boxes, smooth side down, like the Vienna breads and washed on the peel before putting in the oven. The round loaves are set in heavy floured boxes smooth side up, and washed before baking. The rye breads are baked in the first heat before the rolls and other small goods.

SOUR DOUGH FOR RYE BREADS.

Only a small quantity of sour dough is required, and it can be made for a start out of a piece of yeast-raised dough—rye bread dough if possible. Take three pounds of old dough, dissolve in one quart of water, add a little more rye flour, and make a luke warm sponge. Let this stand till the next day, and use it for the first batch with some compressed yeast. Every day keep a piece of the rye dough back to use for a starter for the next day's batch.

RYE BREAD WITH SOUR DOUGH.

One gallon water, 3 pounds of sour dough. Set a sponge with the water and sour dough, and use a good rye flour. Set it at a temperature of 65° F. to 70° F.; let this come to the drop, and put on 6 gallons of water and 12 ounces of salt. Make a medium firm dough with three-fourths rye flour and one-fourth of wheat flour. Let the dough rest until it begins to show life again; then scale and mold into loaves. Give good half proof, and bake in a good heat of 400° F. to 450° F. Do not set the loaves too close together in the oven till they are baked up well; then move closer together and finish baking.

RYE BREAD WITH SOUR DOUGH AND YEAST.

Two pails of water, 2 ounces yeast, 3 pounds of sour dough, 1 pound of salt, 1 ounce carraway seed. Set a sponge with one pail of water, the yeast and sour dough. When the sponge begins to drop put on the other pail of water with the salt dissolved in it, add the carraway seed, and make a rather firm dough (rye dough always loses some of its tightness); work it well and let it come on a little, then scale, mold into loaves and bake in a good heat. While rye breads are best baked on the hearth, bakers who have shelf ovens can use roll pans dusted with a mixture of flour and corn-meal to bake rye bread on.

RYE BREAD WITH A STRAIGHT DOUGH.

One pail water, 3 pounds sour dough, 2 ounces yeast, 8 ounces salt, 1 ounce carraway seed. Dissolve the sour dough and the yeast in the water; add the salt and seed. Have the water at 65° F.; take two-thirds of rye flour and one-third of wheat flour. Make a firm dough and work it well; let it double in size; work over and scale and mold into loaves.

BOHEMIAN RYE BREAD.

For the Sponge: Six pounds of old rye dough, two gallons of water, sixteen pounds of rye flour. For the Dough: Six gallons of water, twenty ounces of salt. Set a slack sponge by dissolving the sour dough in two gallons of water and adding the sixteen pounds of rye flour. When the sponge has got a good drop, put on the six gallons of water and the salt, and make a medium firm dough; let this dough come on about half, and work it over; let it come on again for fifteen minutes and scale and mould into loaves. Some

wheat flour is used in all these rye breads to give strength to the dough. Some of the Bohemian bakers use sour dough and yeast with the sponge, and in New York they use a part of the previous batch to make the next dough out of it.

RYE BREAD WITH SUGAR AND LARD.

One pail of water, six ounces of lard, four ounces of sugar, six ounces of salt. Make a straight dough with the ingredients given, like a wheat bread dough; let it come up to double its size; work over and let it come to; then scale and mould into loaves. Use from one third to one half of wheat flour in the mixture and bake like Vienna bread.

HALF RYE BREAD.

One pail of water, three ounces of yeast, eight ounces of salt, one ounce caraway seed. Set a sponge at 75 degrees F. with half a pail of water and the yeast; use wheat flour for the sponge and rye flour for the doughing. When the sponge is ready add the other half pail of water, the salt and caraway seed. Make a medium firm dough; let it come up half, work down and scale and mould into loaves.

Half rye bread is made in the shape of the Vienna bread, only not so much pointed at the ends, but can be formed into round loaves if desired. When the long loaves are proved they are washed on the peel with water, a straight cut is given on each end, and then they are put in the oven. When baked they are washed again with water, or with a cornstarch wash.

There is another way of making the half rye bread which saves the making of an extra sponge. Many bakers set one large sponge for several kinds of wheat bread; when the sponge is broken up the desired quantity is taken out, and by adding rye flour for doughing, it makes a good half rye bread. Sour dough can be used in the broken sponge and more water added. This makes a still better rye bread.

HALF RYE BREAD WITH MOLASSES.

Some bakers find a good sale for a sweet half rye bread and the recipe is well worth a trial. Take from a white bread sponge, or set a sponge with yeast and wheat flour as usual for wheat bread. Use rye flour for doughing. For each pail take eight ounces of salt and one and one-half pint of N. O. molasses or one and one-half pounds of brown sugar. Prove and bake just like the other half

rye. When the loaves are baked and while hot brush the top over with lard, which makes a nice soft crust. Sour dough and also caraway seed may be added to this dough the same as for the other rye breads.

PUMPERNICKEL.

The coarse rye bread which is here known under the above name is raised with leaven or sour dough. It is made from the rye meal with all the bran in it, and often the darker grades of wheat are blended with the rye meal to give more strength to the weaker rye flour. The stone-milled meal makes a better bread than the rye meal which is made by the roller process, and should be used for this bread if it can be had. The addition of bran to the rye meal makes an inferior bread, and I would not advise its use, although it is used in some bakeries. The best bread is made with a pure rye meal and one fourth or fifth part of wheat flour; it makes a lighter and more palatable bread.

The home of the genuine pumpernickel is Westphalia, a part of Prussia, and in some places an addition of molasses is used to sweeten the bread. The loaves are made very large, from ten to twenty-five pounds and more; the bread is sold in slices and by weight. In small country towns one often meets boys with a hand-cart taking one big loaf to the baker or bringing the baked loaf home. The bread is put in the oven in the evening and taken out in the morning. Westphalia ham and pumpernickel are a well-known delicacy in Germany, which have found their way into some of our best American hotels.

In North Germany this bread goes through the process of "casselling." After it is moulded the loaves are washed and put on a long iron "cassel," which consists of a long piece of sheet iron, six feet long, eight inches wide, and one fourth of an inch thick, with a wooden handle of two feet attached. The ovens are heated on the inside, and the coals are drawn to the front and divided into two long heaps about two feet apart. The iron cassel is pushed in between the two fires; when it has reached a certain degree of heat it is pulled out and the moulded loaves are put on about six at one time, washed and pushed in the oven. The heat forms a thin elastic skin and little blisters; then the loaves are taken off and set on boards to finish proving. This treatment keeps the loaves in shape, prevents bursting, and gives a lighter color to the crust in baking and gives also a different taste to the baked

loaf. It also prevents the loaves from adhering too much. This treatment is not practiced here to my knowledge, because it is too troublesome and not enough of this bread is baked by many bakers to make it pay. For this reason bakers generally mould the bread, give it half proof and wash and bake it like the other rye breads, only set close together in brick shape.

I would advise bakers, in making this bread, to try a different way to form a thin crust on the moulded bread before proving; I know it will make a better bread and any baker who uses a furnace oven can do this without much trouble. For this process the flash heat of the oven can be utilized. Have the pumpernickel dough ready for moulding, and scaled off about fifteen minutes before the oven is ready to be shut down. Begin moulding up the loaves at once. In fifteen minutes they are moulded , and the oven is shut The oven heat at this time is from 550 degrees F. to 600 degrees F. "Swab" and clean out the oven; wash over the loaves; put them on the peel and fill the oven as quickly as possible. The flash heat forms the thin crust and the loaves are withdrawn and set aside to finish proving. If the crust should get a little too crisp the loaves can be washed over, which will soften it again. While proving the oven should be cleaned, and lined on the sides with pieces of wood cut to fit, and then the bread is put in. The loaves are pressed in shape, and slightly greased on one side to prevent sticking. When the bread is taken from the oven it is washed with water.

Where only a small quantity of pumpernickel is made, the loaves can be set in a baking pan, with a wooden frame in it and baked in this manner. I give two recipes:

No. 1.—For Sponge: Three pounds of sour dough, two gallons of water. For Dough: Six gallons of water, eight ounces of salt, one ounce of caraway seed. Set a sour dough with three pounds of old rye dough and two gallons of water and rye meal, in the evening. In the morning put on the six gallons of water and salt; add the caraway seed and make a firm dough with more rye meal. to which some wheat flour has been added. Let the dough rest till it shows life again, then scale, and when it is all scaled, begin moulding. In Germany the loaves weigh from two to ten pounds and even more. Here, only two pound loaves are made.

No. 2.—Like the other rye breads, pumpernickel can be made out of a yeast raised sponge which has been broken up. Some sour

dough is added, and rye meal is used for doughing. One gallon broken sponge, one gallon water, three pounds old rye dough, four ounces salt, caraway seed. Dissolve the rye dough in the water; add it to the broken sponge, also the salt and caraway seed, and make a firm dough with rye meal. Prove and bake as directed in the other recipe. The caraway seed is only optional, and can be left out if so desired.

Individual Breads and Rolls.

Bakers are often called upon to furnish a special bread for parties, banquets or small family dinners. While the ordinary Vienna or French bread is frequently used, the best caterers prefer to serve a small individual loaf or roll to each person. This is an old custom brought from Europe, where it has been in use for many years. The largest individual loaf is made in the shape of the Vienna or French loaf, weighs about seven ounces in the dough, just long enough to fit exactly the oval silver tray in which it is served. The smallest loaf is not more than two inches long and weighs one half ounce. It is used to serve with soups like consomme or boullion. As these breads are made to suit the fancy of the dinner-givers or caterers, they differ considerably in size, weight and quality.

The small loaf or roll most in use is made six to seven inches long, cut and pointed like the Vienna, weighs about four ounces in the dough. Another is made of all milk dough, but like the French loaf, with rounded ends, given two cross cuts like the flutes, or one long cut from end to end in the center, which makes it look like a split loaf. The next is a round loaf made from Vienna dough and weighs from three to four ounces, it is given a cut in the center before baking.

These breads are baked in steam and on the hearth like the Vienna bread, and should have a good crust. They can also be baked on dusted or lightly greased pans without steam; but in this case should be washed with a light egg-wash before baking. If baked on the hearth they should be proved in cloths like the French and Vienna breads. A good Vienna dough is considered the best for these breads; only in case a very crisp and hard-crusted bread is wanted it is preferable to use a water dough. For light luncheons, teas and receptions, where no heavy dishes are served, a special light and rich bread is served (something like the French brioche), with plenty of eggs and butter in it, in fancy shapes like twist, crescent and fingers.

There are other breads whch are used at dinners, like pulled bread, soup sticks and cheese sticks, cheese straws and French flutes or finger rolls. The caterers charge twenty cents per dozen for the cheese and soup sticks and finger rolls, and more for the other fancy breads, so there is a good profit in these small breads.

All these small fancy breads should be made neat and attractive in appearance, the soup sticks and cheese strips small and dainty. Better have them too small than too large. They are often tied in bunches of one dozen, with a blue or pink ribbon and put into the show window.

FRENCH BRIOCHE.

One pint milk; two ounces of yeast; eight to twelve eggs; one pound of washed out butter; one ounce sugar; a pinch of salt. Set a sponge with the milk and the yeast. When this sponge is ready, break in the eggs, and add the sugar and salt. Work this in first and add more flour, then all the butter; make a smooth dough, let it rise and work over several times and set cool to stiffen up. When the dough has rested for some time it is ready to be moulded into the desired shapes, either in round rolls or in long finger-shape. One of these rolls is made in the shape of the Vienna, but cut with scissors in zig-zag from point to point. The regular French Brioche is made in the shape of the cottage loaf, large flat bottom and small top, and cut on the sides. These rolls are baked on pans and washed with a good egg wash before baking.

PULLED BREAD.

The original pulled bread is made by taking the inside out of a fresh baked loaf, and pulling it apart by means of two forks in large flakes, which are toasted in the oven to a light brown crisp. As this is not very convenient to serve in this way, another method is used: A fresh loaf is cut with a sharp knfe into slices about one inch or more in thickness. The crust is trimmed off, and the slices are cut into strips one inch thick, loosened lightly with a fork and toasted on a pan in the oven. This toast is served with cheese at dinners, and is also used for invalids. It should be toasted very dry, without any soft crumb inside.

BREAD STICKS.

Bread sticks or soup sticks are used in place of crackers, to be eaten with soups. They are made from the Vienna dough, and also from common roll dough, with a good shortening, but with very

little sugar in it. The dough when ready should be put in a cool place to stiffen up and to lose some of its springiness. It is easier moulded and keeps its shape better when cold. The dough is then broken in small pieces and formed in long strips of the length and thickness of a lead pencil, put on pans, proved and baked in a cool oven, very crisp and dry.

SOUP STICKS WITH BAKING POWDER.

There is another mixture, which can be made into soup sticks at a very short notice. Baking powder is used instead of yeast: One pound of flour; one ounce of baking powder; one and a half ounces of sugar; one ounce of butter; mix with milk. Rub the butter in the flour, mix in the baking powder, add the sugar and mix with milk a little tighter than Tea Biscuit dough; let it rest a moment, and then form in strips like the other soup sticks. Bake crisp, and brush with milk before baking.

CHEESE STICKS (PAIN SWISS).

Cheese sticks are served with fancy salads and also at the beginning of the dinner after the soups, with the "hors-d'oeuvres," which consists of small patties and other small appetizers. They are made of puff paste in which some dry grated cheese is rolled in. For gentlemen's parties it is often served deviled—that is a dash of cayenne pepper is added to the grated cheese, to sharpen the appetite. The best cheese for this is a dry Parmesan, but a good dry American cheese will answer. Take a piece of puff paste, roll out thin and grate some cheese over it, fold in three and roll out again to one-eighth of an inch in thickness; wash with egg wash and grate more cheese over it; cut in strips from five to six inches long and half an inch wide; put on pans; let it stand for half an hour in a cold place, then bake nice and crisp in a medium heat. A good rich piecrust can be used also for this purpose; but puff paste is better.

CHEESE STRAWS AND BISCUITS.

These are made in the shape of soup sticks, about three to four inches long and of the thickness of a pencil. They are served in the same manner as the cheese sticks. Take equal parts of butter, grated cheese and flour, rub the butter and cheese to a smooth paste, season with a little cayenne pepper, a pinch of dry mustard and salt, add the flour, and with some yolk of eggs and a little milk mix into a paste like a cookie dough; set in a cold place to get firm, and make in strips. Bake in a medium heat.

For Biscuits use the same mixture. Roll out one quarter of an inch thick; cut in round or scalloped biscuits one and one half an inch in diameter; prick with a fork; put on pans and bake to a nice color.

RASPEL BRODCHEN (RASP ROLL).

Rasprolls serve for several purposes in fancy cooking. They are used for fritters, sandwiches, crustades, and also as a special dinner roll. They are made in different sizes and shapes, as ordered. For a dinner roll the size and shape is like the French flutes, only the crust removed. For sandwiches they are made in a smaller oval shape. For crustades they are made small and round, the top is cut off, the inside removed, filled with a meat paste, the top replaced and served floating in bouillon. For fritters a round shape is used; the roll is partly split around, without cutting through, the incision filled with a fruit jam or jelly, then soaked in a custard, and fried in hot lard or butter like the doughnuts.

The rasprolls may be made from a good Vienna dough. They are best if baked on the hearth. For the sweet fritters a good rusk dough may be used. Bake the rolls very crisp in a good heat. While hot grate off the dark crust evenly all around; use a fine grater, or a coarse rasp, such as is used for cleaning the bottom of hearth-baked breads.

VIENNA ROLLS.

The excellent taste of the Vienna bread and rolls is due to the cool treatment of the sponges and doughs, and also to baking the breads in steam and on the hearth. (Only a small part of the fancy rolls are baked on pans, that is the brioches and a rich sort of rolls which contain some shortening.) A light sponge is set with plenty of good strong yeast; both sponges and doughs are taken young; the breads and rolls are moulded up and given about three-quarter proof; then they are set in a cool place to check fermentation, then stiffened up and then they are baked.

The rolls should be divided in three classes: water rolls, milk rolls and rolls with shortening. For the water rolls the ordinary dough is used, and it is made into "salz-stangel," which are rolled up like the kipfel or crescent and laid in salt or in caraway seed and salt, the twist with poppy seed, and the "Spitzweck," a roll formed in the shape of the Vienna loaf. The milk rolls are made with half or part milk, any good Vienna dough a little tightened up may be used. Out of this dough are made the greater part of the Vienna

rolls, the Kaisersemel (or emperor's bread), the crescent or kipfl, and also the different large and small twists with poppy or caraway seed, and also the spitzweck, which is known as the Vienna roll.

The rolls with shortening are baked on pans. For this a milk dough is used in which some cold butter is worked, which gives the dough, or better the rolls a brittle, leafy crust when baked; for the brioche a few eggs are worked in the milk dough, and some round brioches are made with a few sultana raisins in it. The shapes of the brioches are many; like long twist, twisted wreaths or rings, small crescents, snails, and long finger rolls. The making of these rolls requires long practice and dexterity and also much time; but if made and baked all right can not be excelled by any other breads.

VIENNA WATER ROLLS.

One pail of water (12 quarts); six ounces of yeast; eight ounces of salt. Set a very slack sponge with eight quarts of water with a good patent flour; beat it up well, at a temperature of 75 degrees Fah. This sponge will be ready in less than three hours. Take it at the first drop. Dissolve the salt in the remaining four quarts of water, put it on the sponge, break it up well, and with more flour make it into a good medium firm dough, let it come up and work over, give a little time to spring on again; then break it into pieces of suitable size for the different rolls. This mixture will also answer for one and two pounds twist, and if half milk is used instead of all water, it will make a good milk roll.

VIENNA MILK ROLLS.

Ten quarts of milk and water; six ounces of yeast and six ounces of salt. Make a sponge as usual with six quarts of water and the yeast; when it is ready put on four quarts of milk and the salt, and proceed as in the foregoing mixture.

VIENNA ROLLS WITH SHORTENING.

One pail (ten quarts) of milk; one and a half pounds of cold butter; six ounces of yeast; five ounces of salt. Set a soft sponge with two-thirds of the milk and the yeast; beat it up well, and when it reaches the drop, put on the other part of the milk and the salt; break up the sponge and make a medium firm dough; mix half and then add the butter. Draw it in well; let it prove up and work over; let it come on and break out and form into rolls. This kind of Vienna rolls is called "Mürbs" (that means short, or brittle), and the

rolls are baked on pans, not on the hearth. The butter used in these rolls is drawn butter. The butter is melted, drawn off and set on a cold place to harden. It is then drawn into a cool dough very lightly, and the rolls have a nice leafy brittle crust when baked.

VIENNA BRIOCHES.

The Vienna brioches are not made as rich as the French brioches, but make a very nice fancy roll. The shapes vary very much. They consist of several kinds of fancy twists and crescents or kipfl, and of a small round roll, with sultana raisins in it. They are baked singly and on pans, washed with egg wash before baking, but if baked in steam, they are not washed before baking.

One pint milk; two ounces yeast; one ounce sugar; four eggs; eight ounces butter; a pinch of salt. Make a light sponge with the milk and yeast; when it is ready, work in the beaten-up eggs, salt and sugar; work in some flour and add the butter, work into a nice even dough, rather slack; let this dough come up and work over; then set in a cold place to stiffen up for one hour. Then it is ready to form into the desired shapes. Give good proof and bake in a medium heat of 350 degrees Fah. to a nice golden color.

FRENCH ROLLS.

Beside the Brioches, the French flute roll and the split roll are most generally known. They are made from ordinary French bread dough, and are baked very crisp; like the Vienna rolls they are baked on the hearth. Where only very small quantities are made, or the condition of the hearth does not warrant baking the rolls in this manner, pans dusted with flour and cornmeal can be used to bake the rolls on. They are baked also in steam like the Vienna rolls. Many bakers prefer to use a rich Vienna dough for the split rolls, which makes a softer and more brittle crust than the water dough.

FRENCH FLUTES.

Use a French or Vienna dough; break up in three-ounce pieces, mould round on the board, give a little proof, form into little loaves from five to six inches long; set in cloth-lined boxes and draw up in folds like the French bread; prove and turn smooth side up on the peel; give two or three slanting cuts and bake in steam.

FRENCH SPLIT ROLLS.

Use the same dough as for flutes. Break in two-ounce pieces mould round in box or on boards; give a little proof and brush the

tops very lightly with melted lard. Take a small rolling-pin, about half the thickness of a broom stick; press down along the center; turn over; set in cloths, split side down; pinch up the cloths between the rows and let it prove up well; turn over and set on the peel split up, and bake in a good heat of about 400 degrees F. Bake in steam.

GERMAN ROLLS.

All the former rolls mentioned as Vienna and French rolls are made by the German bakers, and almost every city has some other special rolls. The treatment of doughs also differs very much. While in the northern cities, like Hamburg and Bremen, straight doughs are used, in central and southern Germany sponge doughs predominate.

The rolls are divided into water and milk rolls, and several cheap grades are made from middlings. The richer grades are baked on pans, while the others are baked on the hearth. The best known rolls of this kind are the Hamburg roll. (Rundstück), often called German Brodchen, and the German semmel, bread roll. The treatment of the Brodchen is a peculiar one. At Bremen and Hamburg, the bakeshops where the white breads are baked are situated over the ovens, and are so hot that the bakers are compelled to work almost naked; they wear only an apron, formed like a short skirt. Next to the hot room is a cool room. The doughs are made in the hot shop, straight and very slack, like a sponge, taken out of the trough and the batch divided and put into several smaller, trough-like boxes, and set to rise. Some of the dough is set in the cool room, and the dough intended to be used first is kept in the hot room. When the doughs have rested for half an hour, the bench is dusted with flour, one box of dough turned out on it, and the dough is punched over in very small pieces of not more than one pound, put back in the box again to raise, and this is repeated about four or five times with the whole batch, which is often a three and four-pail batch. The strong yeast, slack dough and the warm shop, and the frequent punching ripens the dough in a short time. The dough is made into rolls. The rolls are moulded in egg-shape, set on boards, which are very heavily dusted with fine bran (not on cloths). The rolls are moulded and proved in the hot shop, and when the first moulded rolls have the required proof, the foreman goes down to the oven, which is made ready, the rolls are let down through a chute, and the baking commences.

The oven is filled from the left to the right hand, the rolls are

set on long narrow peels (schlagschieber), given one cut through the center, and the oven is filled in a short time. The rolls on the left are done by this time, they are taken out with a large broad peel, or pulled out with a crutch into a basket in front of the oven door; more rolls are put in the oven, and baking is continued till the whole batch is worked up.

HAMBURG RUNDSTUCK (GERMAN BRODCHEN).

One gallon of milk; four ounces of yeast; two and one half ounces of salt. Make a very slack straight dough, set very cool, almost like sponge; use a good patent flour. Set the dough to rise in a warm place; let it rest for half an hour, and put on the bench and work over in one-pound pieces. Put back to prove. Repeat this four or five times. The dough should be light and full of life by this time, and ready to mould. Mould oval, in two-ounce pieces; set in dusted boxes or on floured cloths; prove and bake in steam.

An easier way of making these rolls is to bake them on pans and use a slack Vienna dough. Mould up in the oval shape; set on pans dusted with a mixture of flour and cornmeal; set to prove in a moist prover; let it prove up half and cut with a sharp knife one deep cut across the center. Set back to finish proving; give full proof and bake in steam. If baked without steam they should be washed with water before baking and with a cornstarch wash after baking.

GERMAN WATER ROLLS.

The bread or water rolls are made by the sponge method, and for this roll any of the Vienna or French water doughs may be used. Break the dough in one-ounce pieces, mould round and set on board; give a little proof; take two pieces, press lightly together, set in cloth-lined boxes, pinch the cloths up between the rows; set to prove and bake on the hearth and in steam, like the other rolls. The rolls can also be set on dusted pans, proved and baked.

VIENNA ROLLS.

In the American-Vienna rolls, milk, sugar and lard are used to a large extent in all the mixtures. The former recipes are the genuine Vienna mixtures as they are used by the Vienna bakers.

AMERICAN VIENNA ROLL MIXTURES.

One pail of milk and water (12 quarts); two pounds of lard; six ounces of yeast; twelve ounces of sugar; five ounces of salt.

Set a sponge with eight quarts of water, rather slack, at 75 degrees Fah. When it is ready put on four quarts of milk, sugar and salt. Mix about half and add the lard and finish mixing. Let it prove up well and work over; let it come a little and break out and form into rolls. Prove and bake like the other Vienna rolls.

VIENNA ROLLS WITH STRAIGHT DOUGH.

One pail (10 quarts), half milk and water; six ounces of yeast; one pound and four ounces of sugar; five ounces of salt; two pounds of lard. Make a medium firm dough with the ingredients given. Work the dough well; let it rise and work over twice, then it is ready to form into rolls. For the crescents and twist it is better to have a firm dough, while for the spitzweck (rolls made in the Vienna loaf shape), a slacker dough may be used. These rolls are baked on pans, and can be baked without steam, but in this an egg wash is used before baking.

AMERICAN ROLLS.

There is no doubt that most all the rolls made in this country are of foreign origin at least in the shape. The ingredients and also the manner of baking are different; they are made richer, and with a softer and more brittle crust. The only roll which may possibly be of American origin, and which has many names, is the roll which is variously named the Parker House Roll, the Albany Roll, the Pocket-Book Roll, etc. I have not met with this shape of roll in Europe. There are a variety of recipes for this class of rolls.

PARKER HOUSE ROLL.

No. 1—One-half gallon milk, one-half gallon water, three ounces yeast, one ounce salt, one pound butter, ten ounces sugar. Set a sponge as usual with the water and yeast, use a good patent flour. When the sponge is ready put on the milk, sugar and salt, Add the butter when the flour is mixed in, and work it into a nice medium dough. Let this dough come up and work over twice, then break out in small pieces. Mold round on the board; give a little proof; take a small pin and roll flat in the center; take some melted butter or lard and brush over; double both sides together and set on pans; they may be set close, to touch in baking or singly. The rolls should not be given too much proof. In baking they should open and the top curl backwards, if given the right proof.

If proved in a moist temperature they require no washing, but may be brushed with butter or lard when done.

No. 2—One gallon milk, four ounces yeast, six ounces sugar, twelve ounces butter, two ounces salt, straight dough. Dissolve the yeast with a little lukewarm water and make a batter with some flour; let this batter stand in a warm place for fifteen minutes, then proceed to make the dough. Take the milk at 85 degrees Fahr., flour and shape to correspond; add sugar and salt to the milk, mix and add the butter. Finish mixing, work the dough well; let it come up and work over twice, and mould into rolls.

No. 3.—One gallon white bread sponge, three-fourths pound sugar, one pound lard, two ounces salt. Work the sugar and lard into the broken-down sponge with more flour; let it come on once, and then break out into rolls.

POCKET BOOK ROLL.

Half gallon milk and half gallon water, mixed, eight ounces yeast, one and one half ounces salt, one pound sugar, one pound lard. Set a very slack sponge at 85 degrees Fahr., flour and shop at the same temperature. At this temperature the sponge will drop in about one hour. Cream the sugar and lard together; add the salt and rub it into some flour, and make a medium firm dough. Let it prove up once and proceed to mould into rolls. A dough made in this manner can be got ready in a very short time.

BUTTER ROLLS.

Ten pounds white sponge, one pound butter, one half ounce salt, one half pound sugar; mace and lemon flavor. Work the ingredients given into the sponge and add more flour to make a medium firm dough; let it come up once and make into rolls. Break out and mold round on the bench; give some proof; brush with butter and roll into long strips; double up and twist rope fashion; set on pans so they touch lightly; brush again with butter; prove and bake in a brisk oven. Bake to nice light brown.

MILK ROLLS.

One gallon milk, three ounces yeast, four ounces sugar, four ounces lard, two ounces salt. Make the ingredients into a straight dough, or set a sponge with the milk and yeast, and work in the sugar, lard and salt when it is ready. When the dough is ready work it up into "Pocket Book Rolls," or in the shape of the butter rolls. Brush over with some melted butter when done and while hot.

FINGER ROLLS.

Finger rolls may be made out of all the foregoing rich roll mixtures. They should be made nice and small and weigh not more than one ounce in the dough. They should be about five inches long, and not more than one inch in diameter; given full proof; washed with milk and egg, and baked nice and crisp.

A very nice roll may be made from this mixture: Two quarts milk, four ounces yeast, one pound butter, three fourths pound sugar, eight eggs, mace and lemon flavor. Make a very light sponge with the milk and yeast; beat the eggs and sugar up light and when the sponge is ready add to the sponge; break it up; add more flour, and when half mixed add the butter. Let it rise and work over. Let it come on and break out in pieces; ball round and let rest a few minutes, then form into fingers, set far enough apart so they do not touch in baking. Before they get full proof wash over; set back to finish proving; bake in about 350 to 400 degrees Fahr., to a nice color.

NEW ORLEANS ROLLS.

Twenty pounds of bread sponge, one and one half pounds sugar, one and one half pounds butter, one quart milk, two ounces salt. Work the milk and the other ingredients into the sponge and with more flour make a medium dough. Let it prove up once and form into rolls. Break in two-ounce pieces, roll in long strings as for pretzels and twist into a long knot; set on pans so they touch on sides and ends in baking; brush ends with melted lard so they separate nicely, give good proof and bake in a medium heat of 350 degrees Fahr.

No. 2.—One gallon of milk, one fourth pound of yeast, one pound lard, one half pound sugar, one and one half ounces salt, one half pint molasses, one half ounce cinnamon and ground ginger. Make a straight dough; have the milk at 75 or 80 degrees Fahr., shop and flour to correspond; make a nice smooth dough; let it come up and work over a couple of times. Break into pieces of two ounces each; roll out with both hands like pretzel; double up and make in twist with narrow ends; set on pans single; give half proof; wash over with egg wash; set back to finish proving and bake in a brisk oven.

COLUMBIA ROLL.

These rolls are also called Frankfort Rolls, because they are the most convenient to use for a sandwich with the Frankfort sausage

for outdoor entertainments. The rolls are made in the shape of a large finger-roll, a little longer than the well known sausage. They were sold in very large quantities during the Columbian Exposition, hence the name. The rolls may be made from any cheap roll mixture, but should be proved very light and have a soft crust.

One gallon milk; 2 gallons water; 6 ounces yeast; 1½ pounds sugar; 1½ pounds lard; 5 ounces salt. Set a sponge with the water and yeast at 85 degrees, medium tight. Take it at the first drop. Add the milk, sugar and salt; mix half and add the lard; make a good smooth dough. Let it rise, and work over twice; break in two-ounce pieces; mould in long fingers, set on pans to prove so they do not touch; give half proof, wash with milk; give full proof and bake in 400 to 450 degrees Fahr.

PLAIN SANDWICH ROLL.

One pail water; 6 ounces yeast; 1½ pounds sugar; 2½ pounds lard; 5 ounces salt. Make a straight dough with the ingredients, as usual, rather slack; work the dough well, and when ready break in two-ounce pieces, mould round and set on pans single; give good proof and bake in 450 degrees F.; wash with water, or brush with lard while hot. Plain rolls are made in the same manner, only set close so they touch in baking.

GRAHAM ROLLS.

No. 1.—Two quarts milk; 2 quarts water; 1 pint molasses; 2 ounces yeast; 2½ ounces salt. Make a straight dough with an even mixture of graham and white flour, rather slack; work over, give a little time to come on, and mould into rolls in round or oval shape; set single; give medium proof and bake in a brisk heat; brush with melted butter or lard while hot. A dough may be made also out of one gallon of white bread sponge, molasses added and graham flour used for doughing.

No. 2.—Half pound lard; 6 pounds whole wheat flour; ½ pint molasses; 3 pounds graham flour; 2 ounces salt; 3 pounds white flour; 2 ounces yeast. Make a straight dough with about one gallon of milk and water, medium; let come up and work over once; let come on and mould on pans set so they touch lightly; brush with lard on the sides so they break easily. Prove and bake in good heat 400 degrees.

Buns and Rusks.

Rolls are often named buns, and buns rusks, and so forth. To get a little light in this tangle it would be preferable to name only the yeast-raised breads Buns and Rusks; the unfermented Buns or Rusk in which baking powder or ammonia is used should be called Biscuits.

For making buns and rusk, which are often made only in very small quantities, but richer than the plain rolls, a white milk or water sponge can be used, or a plain roll dough. The enriching ingredients worked in and more flour added, and given time to prove on again, before using.

One quart of milk or water makes about five pounds of sponge with the flour added; instead of setting one quart of sponge, take five pounds of it from a larger sponge and work in the ingredients given for one quart mixtures; if using off a slow bread sponge for the purpose, a little more yeast can be added to make it prove faster.

For cheaper grades of goods egg-color is used to make the goods look richer, but it has often the contrary effect; it should be used with care; better none at all than too much of it. The use of eggs is for the purpose of giving the goods a flaky lightness, which cannot be produced without eggs or by using substitutes.

One other method of making the different sweet doughs, which is practiced in many bakeries, is to set one large milk sponge, and make a standard dough, with eggs, butter and sugar in it. Out of this dough the various kinds of rusk, buns, and fancy rolls are made, and it can be made richer for better goods. Almost every kind of fancy bread can be made by this method, with little trouble.

For all doughs which are enriched with butter and sugar, and to which, after raisins, currants and chopped peel or almonds are added, it is preferable to use more yeast than in the ordinary bread sponges. To make them still stronger they are often used as one-half or three-quarter sponge, that is the quantity of liquid used in the sponge is one-half to three-quarters more than the quantity used for doughing. The sponge is also used straight; that is no

other liquid is added, only the eggs, sugar and shortening are worked in, and more flour, to obtain the right consistency.

STANDARD DOUGH MIXTURE.

I give here a choice of standard dough mixtures, for a variety of goods, which may be made less expensive by substituting lard or use half-and-half, also by using less eggs.

No. 1.—Set a medium sponge with 8 ounces yeast; 1 gallon milk and water. When the sponge is ready use for doughing, add 2½ pounds sugar; 2 quarts of milk; 2½ pounds butter and lard; eight eggs; 1½ ounces of salt; for flavor, lemon extract, ground mace. Dissolve the sugar in the milk, add salt and eggs, put on the sponge; work in a part of the flour; add the butter and lard and make a nice smooth dough; let it come up and work over twice, then it will be ready to use.

No. 2.—For sponge: One gallon milk, 8 ounces yeast. For doughing: 2 quarts milk, 1½ pints of eggs, 1½ ounces salt, 2¼ pounds of lard or butter, 2¼ pounds of sugar lemon extract, mace. Proceed like in the former recipe.

No. 3.—One gallon milk, 8 ounces yeast, 2 pounds sugar, 2 pounds of butter, 20 eggs, 1 ounce salt, lemon and mace. Set a slack sponge with milk and yeast. When ready beat the eggs and sugar together rub the butter in part of the flour add to the sponge and make a nice smooth dough. Work over and let it come up twice, and it will be ready for use.

No. 4.—One gallon milk, 12 ounces yeast, 2½ pounds sugar, 2½ pounds butter and lard, 1½ ounces salt, mace and lemon extract, 1 quart milk. Set a sponge as usual, with one gallon of milk and the yeast. When ready add one quart of milk and the other ingredients. Let it come on and work over twice and it is ready for use. This mixture contains no eggs, but more yeast. Egg color may be used if so desired.

Here are some smaller mixtures for standard doughs, from larger sponges:

No. 1.—Ten pounds milk sponge, 1¼ pounds butter, 1 ounce salt, 1¼ pounds sugar, mace, lemon extract, 4 eggs.

No. 2.—Ten pounds of sponge, 12 ounces sugar, 12 ounces butter, 10 eggs, mace, and lemon extract.

No. 3.—Ten pounds of sponge, 1 pound of butter, 12 ounces sugar, 10 eggs, ½ ounce salt, mace and lemon.

No. 4.—Ten pounds sponge, ½ pint milk, 1 pound butter and lard, 1 pound sugar, lemon, mace.

All the given mixtures may be made into coffee-cake, pretzels and many other cakes, as well as into rusks and buns.

THE USE OF FRUIT IN CAKES AND BUNS.

When using fruit in buns or in other yeast-raised cakes, the fruit should be prepared the day before using. These fruits are often used in a very dry state. They draw moisture from the cakes and make the cakes dry. It is better to moisten the quantity of fruit used for each day, the day before, with a light syrup or water, so the fruit gets soft and regains the natural shape. In this way it is more acceptable in cakes and is much better to eat.

HOT CROSS BUNS.

Any of the previously printed standard bun mixtures can be made into this favorite bun, by the addition of currants, spice and flavor. The dough for this bun should be made rather slack. The original shape of the bun is the round one, but they are often set close together, so they form squares when baked. The cross-cut is put on when the buns have about half proof (either with a sharp knife, scissors, or with a stamp), and the buns set back to finish proving, washed with an egg-wash before baking, and dusted with sugar or iced after baking. For a special bun they should be made better than the everyday buns, even with less profit; they serve to draw trade and are a good advertisement. I give here some special recipes:

No. 1.—Two quarts milk; four ounces yeast; three fourths pound sugar; one and a half pounds butter; ten eggs; one half ounce salt; one pound currants; lemon flavor; mace. Make a warm sponge, rather slack, with the milk, yeast and flour. When the sponge is ready add the sugar, eggs, salt and flavor, beaten up; then mix in more flour, add the softened butter and finish mixing. Put in the currants; let it prove up and work over; let it come up half and break up in small pieces, mould round, set on pans, far enough apart so they do not touch in baking. Give half proof; stamp or cut on the cross; wash with egg-wash; set back to finish proving, and bake in a brisk heat, about 400 degrees F. Ice when baked, with a good vanilla water icing.

No. 2.—Two quarts milk; four ounces yeast; two pounds butter; one and one fourth pounds sugar; sixteen eggs; one half ounce salt;

two pounds currants; lemon and mace. Proceed as in the foregoing recipe.

No. 3.—Ten pounds of milk sponge; one and one half pounds butter; twelve ounces sugar; eight eggs; one and one half pounds almonds; lemon; mace. Work the ingredients into the sponge; let it prove up once and make into buns as in the first recipe.

PLAIN BUNS.

Plain buns are made in both round and square shapes, without any fruit. It is best not to have the dough too stiff. Break out as usual, to sell for about ten cents a dozen; give good proof and bake in a good brisk oven. When baked they are left plain; often they are iced like the flat cross buns; while others brush them with butter and dust sugar and cinnamon over them while hot.

CURRANT BUNS.

Take any of the plain standard dough mixtures, roll out in long strips, sprinkle with currants, press in the currants with the rolling-pin, dust over with a mixture of powdered sugar and cinnamon, and roll up into a double coil, flatten and cut up in narrow strips, set on pans close together with the cut side up. Give good proof; bake, and wash with melted butter and dust with sugar, or ice while hot.

PLAIN CURRANT BUNS.

Take five pounds of plain bun or roll dough; work in one pound of well washed currants; flavor with lemon; break out in small pieces; mould round; set on pans so they touch lightly in baking. Wash with milk; prove, and bake in a good heat.

SULTANA BUNS.

One quart of milk; three ounces yeast; eight eggs; twelve ounces sugar; one pound butter; lemon and mace; one and one half pounds sultana raisins. Set a light sponge with the milk and yeast, and when ready work in the other ingredients; put in the raisins the last thing; let it come up and work over twice, and break out into buns. They may be molded round or in the oval shape, just like the other buns, and also be made in large size, to sell from five to ten cents each. Ice after baking.

GERMAN ALMOND BUNS.

To five pounds of a rich standard dough add eight ounces of finely chopped almonds; mould into long ovals; set on pans and

flatten out; set singly, so they do not touch in baking; give half proof; wash with egg-wash and sprinkle with chopped almonds. Finish proving, and bake in a medium heat so the almonds do not burn; dust with powdered sugar when done.

GERMAN STREUSEL BUNS.

Use a good standard dough or a flat cross bun mixture with the currants in it. Break out and mould round on board; pin out into flat ovals; set on pans so they touch lightly on the sides; wash over with milk, and sprinkle thick with "streusel," finish proving and bake in a good heat. When baked brush with melted butter and dust with powdered sugar and cinnamon.

Streusel is also used for coffee cake, and is made of different qualities. The ingredients are formed into a soft, crumbly paste; this is rubbed through a coarse sieve or a colander and formed into little globular pieces, which are given a little time to dry, and are used on the cakes in this manner.

STREUSEL.

No. 1.—One pound of sugar; eight ounces of butter; one and one fourth pounds of flour; two ounces chopped almonds; lemon extract and cinnamon. Mix the flour and sugar and almonds together; melt the butter and add it to the mixture. If still too dry, sprinkle a little milk over, to form a soft dry paste. Rub into little globules and spread on the cakes.

No. 2.—One half pound almond paste; one half pound butter; one half pound sugar; one half pound flour; lemon and cinnamon extract. Rub the almond paste and sugar together, then add the butter. When this is incorporated, mix in the flour.

No. 3.—One pound of flour; one half pound of sugar; six ounces butter; one egg; lemon, cinnamon and almond flavor. Mix together and put away for use.

FLORADORA BUNS.

Take ten pounds of milk sponge or plain bun dough; add three fourths pound of sugar; eight eggs; one and one half pounds of butter; one pound of cocoanut; eight ounces citron; eight ounces orange peel; vanilla flavor. Work the sugar, eggs and butter into the sponge; add enough flour to make a medium dough; then add the peel and cocoanut. If shredded cocoanut is used, it should be chopped fine. Let the dough prove again and break in two-cent pieces; mould round, and then form in fingers or little oblong

loaves; set on pans so they touch only on the sides; prove and wash with a good egg-wash; sprinkle with long shredded almonds, and bake in a medium heat of about 350 F. Brush with a thin vanilla water icing when baked and while hot.

BISMARCK BUNS.

Take a good plain bun dough and mould up into round balls, let it prove on; pull apart in the center lightly and fill the impression thus made with a little good fruit jam; pinch the sides over the jam to enclose it, and set on pans, the pinched side down. Set close enough so they touch in baking; brush over with melted butter and set to prove. Give good proof and bake in a brisk heat. While hot brush again with butter, and dust with sugar and cinnamon.

OPERA BUNS.

Take ten pounds of standard dough; roll out into long flat strips of ten inches wide and one quarter inch thick; brush over with melted butter and sprinkle powdered sugar over; roll up into one long roll; flatten and brush over with butter; cut into strips and set on pans, cut side up, to touch on the sides; wash over with milk and sprinkle with chopped blanched peanuts. Prove and bake in medium oven. Ice over when done.

MARTHA WASHINGTON BUNS.

Take a rich standard dough; roll out in long strips about six inches wide and half an inch thick; wash over with milk and spread along the center the nut paste, given at the close of this recipe; fold over the sides and form a long strand about one inch thick; cut into pieces four inches long and place on pans side by side; brush each side with melted butter, so they separate nicely, when baked. Set to prove; wash with egg-wash and sprinkle coarse sugar on the top and bake in a good heat.

NUT FILLING.

Set one pound of brown sugar to boil with a little water. When boiled down enough so it forms a thread if tested between the fingers, add eight ounces of chopped walnuts and stir in eight whole eggs beaten up; take off the fire and add enough sweet cake crumbs to form a soft paste; flavor with cinnamon and cloves. This filling may also be used for nut cake and in puff-paste tartlets.

COCOANUT BUNS.

To five pounds of standard dough add one pound of freshly grated cocoanut; with vanilla. Work this dough up into long ovals, pointed at the ends; do not pan too close; prove; wash; bake in a good heat. Color to a nice light brown in the oven some shredded cocoanut. Ice the buns and sprinkle some of the browned cocoanut on the icing before it becomes dry.

CARAWAY AND ANISE BUNS.

Take any of the bun mixtures; add lemon extract or grated lemon rind. To five pounds of dough add one ounce of anise or caraway seed, and form into buns either round or oval. They may also be made into long strips like zwieback, and toasted when one day old. These buns are not iced; they are better plain. There are a great many other mixtures, with baking powder and ammonia, but most of them are in reality the common drop and fancy cake mixtures stiffened up with more flour, or with part of the milk out.

RUSKS.

Rusks are very much like buns, but approach nearer to the French Brioches, which should be the right name for them. Like the Brioches, they are made very rich, with plenty of butter and eggs, but contain very little sugar. The recipes are almost identical with those for Brioches. Rusks should be of a delicate lightness and very close grained. Three recipes are given:

No. 1.—One quart of milk; two ounces yeast; two pounds of butter; eighteen eggs; four ounces sugar. Set a medium sponge with the milk and yeast. When the sponge is ready, cream the butter with some flour; beat up the eggs and sugar; put on the sponge and make a medium slack dough. Let it come up and work over; set in a cool place to stiffen up for one hour. Break into small pieces and mould round on pans. Rusks are made round and baked single; they are also set close to form squares when baked. One other favorite shape is moulded like the Parker House Roll, then it is cut on the folded side, which looks very nice when they are baked.

No. 2.—Five pounds of milk sponge; one and one half pounds of butter; twenty-four eggs; five ounces sugar.

No. 3.—Five pounds of milk sponge; one pound of butter; six ounces sugar; 12 eggs. Work the ingredients into the sponge as in the former recipes; prove and bake as directed. For the plainer mixtures, use the standard doughs. For anise rusks add one ounce of seeds to five pounds of dough.

ENGLISH BATH BUNS.

This bun is not moulded like other buns; it is broken from the dough or dropped on the pan with a spoon and flattened slightly so to have a rough rock-like appearance when baked. To obtain this, some bakers roll and fold in the butter as for puffpaste; others drop the hard, cold butter in some flour and add this last to the proved-up dough with the fruit and peel. The bun is made larger than other buns—selling two and three for ten cents.

Four pounds flour, four ounces of yeast, nearly three pints of milk, twelve ounces of sugar, one pound of butter, four eggs, the grated rind of one lemon, eight ounces of currants, eight ounces of chopped peel. Set a sponge with three pounds of flour and one quart of milk, and the yeast. When ready add the rest of the milk, sugar, eggs and flour; then add the cold butter dropped in small pieces in some flour, also the peel and currants, let it prove on a little, then drop on the pans as suggested above; spread out some and wash with a good eggwash, sprinkle with coarse granulated sugar, or with crushed loaf sugar, give good proof and bake in a medium hot oven to a nice color.

In place of making an extra sponge, you may take five pounds of milk sponge, or the same amount of plain roll dough, and work in the ingredients given in the above recipe. The mixture should be rather slack, just like a rich cake dough. A less expensive bun of this kind can be made by omitting the eggs, using lard in place of butter, rolling the dough out flat as for currant buns or snails; brush it over with lard, sprinkle with currants and peel and roll up; then break the roll in pieces; set on pans and cut up the top with the scraper to make it rough-looking, then finish in same way as given above.

Zwieback and Stollen.

The standard dough mixtures as well as the rusk mixtures, will make a variety of zwieback, and give bakers a choice in quality as well.

Zwieback is one of the most delicious German table breads, if properly made. It should be prepared fresh every day, baked once and toasted or dried freshly in small batches three or four times a day. There is as much difference between a stale and a freshly-toasted zwieback as there is between a stale and a fresh-baked roll. Zwieback loses much by being exposed to the air for some time; like plain bread toast it tastes best when newly toasted. By observing this point in making zwieback, many bakers have worked up a nice trade in this style of goods and made it a winner.

HAMBURG ZWIEBACK.

Two quarts of milk; four ounces of yeast; one and a half pounds of sugar; one and a half pounds of butter; eight eggs; lemon and cinnamon extract. Make a straight dough, rather slack, with the ingredients given. Set in a warm place to rise. When half risen, throw the dough on the bench and work over in small pieces, not larger than one pound, put back to prove on again, and work over in the same manner. Repeat this four or five times, till the dough is ready. Break out and mould on pans in round balls, set single, so they do not touch in baking; give good proof, and bake in a medium heat to a nice light brown color. Let them stand from six to eight hours to cool, then cut through the center with a sharp knife, set on pans and dry-toast to a nice brown in a cool oven; set the tops and bottoms together and put away for use.

ZWIEBACK NO. 2.

One gallon of milk; six ounces of yeast; one pound of butter; one pound of sugar; one-half ounce of salt; lemon and cinnamon extract. Set a slack sponge with milk and yeast. When ready

cream the butter and sugar and add to the sponge. Make a medium soft dough; let it come up and work over; let it come on once more and work up into zwieback like the former recipe.

HAMBURG KINDER ZWIEBACK.

These zwieback are made without sugar; they are used for children and invalids. One quart of milk, one quart of water, four ounces of yeast, one and one-half pounds of butter, one and one-half pounds of potato starch or cornstarch, two ounces of salt. Set a sponge with the milk, water and yeast, using wheat flour. When ready rub the butter and starch to a cream, add this to the sponge with the salt, and add more wheat flour to make a medium firm dough. Let it come up and work over, then break out in small half-ounce pieces. Mould round and set on pans single, prove and bake like the other zwieback; cut and toast tops and bottoms and put away for use.

OTHER GERMAN ZWIEBACK.

Two quarts milk; four ounces yeast; eight eggs; three fourths pound of sugar; three fourths pound butter; mace and lemon extract; one half ounce salt. Set a light warm sponge with the milk and yeast. When ready put on the other ingredients and make a nice smooth dough. Let come up and work over twice; break out into small one-half ounce pieces; mould round and then in small fingers about three inches long; set close together on pans so the fingers touch each other on the sides and form one long roll the length of the pan; give good proof and bake. Let stand for one day, then cut in slices; put on pans and toast to a nice brown. If the oven is too warm and the zwieback takes too much color before thoroughly dry, the zwieback is set to cool and returned to the oven to finish drying.

VIENNA ZWIEBACK.

Take the standard dough or the rusk mixtures, form into long ovals, finger shape, bake single and split and toast dry, tops and bottoms.

HUNGARIAN OR PRESBURG ZWIEBACK.

Make like the Vienna, in long fingers, but have the ends larger than the center, almost like Ladyfingers; prove and bake like other zwieback, cut in halves and dry-toast; make a light meringue icing, beat up five whites of eggs, add one pound of powdered sugar and mix in some chopped almonds; spread on the toasted side of the zwieback, and set back in the oven to dry.

With a variety of icing the zwieback may be made into vanilla, cinnamon and chocolate zwieback. Stale rusk and buns may also be converted into zwieback, by toasting and icing. A very nice sweet toast which is much sold in bakeries is made from a plain sponge cake mixture, baked in long, half round forms, with aniseed in it, It is cut and toasted like other zwieback. Stale pound cake also makes a nice fancy toast and sells well.

The Stollen is the German holiday fruitcake. Like the American fruitcakes it is improved by age. For this reason the German housewife gets busy a month before Christmas to make the stollen for the holidays. A good rich yeast-raised dough is made for this purpose, and the proportions for a good grade of stollen are about one pound of fruit for the pound of flour. Some stollen are made with mixed fruit, and others with almonds only, and they are divided into different grades, according to the richness of the doughs and the quantity and quality of fruit used in it.

GERMAN STOLLEN.

One quart of milk; three ounces yeast; one and one fourth pounds butter; three fourth pound sugar; eight eggs; one pound sultana raisins; one pound malaga raisins; two pounds of currants; one pound of citron and orange peel; lemon extract and mace. Set a sponge with the milk and yeast. When the sponge is ready, beat up the eggs and sugar, add the flavor and put on the sponge; break it up well and work in some flour; add the butter and more flour to make a firm dough; add the fruit the last thing. Let the dough prove up well and work over, then scale into pieces; mould into long shape like the Vienna loaf, then take a long rolling-pin, press down along the center, as for split loaves, flatten out a little, have the bottom side larger than the top, and fold over on the side like the pocket-book rolls. Set to prove on pans; give about three-quarter proof, brush over with melted butter and bake in a medium heat of 350 degrees F. When done brush again with butter and dust at once with a mixture of cinnamon and powdered sugar, as much as the butter will take up.

The stollen are made from one to ten pounds, and are sold by weight.

ALMOND STOLLEN.

Take the same mixture as given above; leave out the fruit, and add in place of it two pounds of sweet almonds and four ounces of

bitter almonds, blanched and chopped fine. Prove and bake like the other stollen.

The stollen may be made of a lighter grade, less expensive; and any of the standard dough mixtures, stiffened up with more flour and with fruit or almonds added, will make a good stollen. It is customary here to wash the stollen with an egg-wash before baking, and ice after baking.

PLAIN STOLLEN.

Two quarts of milk; four ounces yeast; ten eggs; three fourths pound of sugar; one and a half pounds butter; two pounds raisins; one pound currants; one half pound citron; mace and lemon extract. Make a light sponge with three pints of milk and the yeast. When the sponge is ready put on the other pint of milk, sugar, eggs and flavor; add the butter and make a medium firm dough; work in the fruit; let it rise and work over; scale and proceed like in the other recipes.

A richer grade may be made from the following recipe:

Five pounds milk sponge; five eggs; one pound butter; three fourths pound of sugar; one pound of sultana raisins and one pound of currants; one half pound of chopped almonds; one half pound of citron; the grated rind of two lemons; one eighth ounce mace. Make a medium firm dough with the ingredients given; wash the stollen before and after baking with melted butter, and dust with powdered sugar and cinnamon.

PLAIN STOLLEN NO. 2.

Ten pounds of standard dough; two pounds of raisins; one pound of currants; tighten up the dough with more flour and work in the fruit. The stollen may be washed with an egg-wash before baking, and iced plain when done. Another way is to sprinkle with browned chopped almonds before the icing gets dry.

Coffee Cakes, Etc.

The central part of Germany is the home of the coffeecake, and there it is made to perfection. The cakes are not made as thick as the American coffeecake, not more than one inch in thickness; the cakes are washed thickly with melted butter before and after baking; and the sugar and the melted butter form a tasty crust which melts on the tongue.

Coffeecake is made in a flat shape, either in a full sheet, the size of the baking pans, or in smaller squares, and also in round shapes the size of the layer cake tins. The best known coffeecakes are the Streusel, Almond, Cinnamon and Raisin or fruit coffeecake or Kuchen. There are a variety of other cakes which are used as coffeecakes, but generally are not counted in this class. There are potatocakes, cheesecakes, creamcakes, and all the fresh fruit cakes, which are made mostly when the fruits are in season. Other large yeast-raised cakes are the Kauglauff or Gugelhupf, which are known in Germany as Napfkuchen, in France as Babas, and in Vienna as Gugelhupf. These cakes are baked in deep forms, plain and scallopped, with a large tube in the center. They are one of the oldest and best known coffeecakes. I will give some recipes later on. The other variety of coffeecakes consists of the rolled-in goods. For this grade the plain cake dough is enriched by rolling in cold butter in the proportion of one pound of butter to five pounds of standard dough. This makes a nice leafy dough, almost like puff paste. For some other kinds of those goods the butter is added to each individual piece, and rolled in in this manner. Out of these doughs are made a variety of pretzels (Blunderpretzel), Snails, Wreaths, Crowncake (Kranzkuchen) and many other smaller fancy rolls.

GERMAN COFFEECAKES.

One quart milk; four ounces yeast; twelve ounces sugar; one pound of butter; twelve eggs; lemon and mace. Set a light warm sponge with yeast and milk; when ready add eggs and sugar well beaten, also the flavor; break up the sponge, add the flour, mix half

and put in the butter and make a nice smooth dough, rather slack. Let it come up and work over twice. Scale into pieces and roll out into large or small flat cakes. Brush with butter, set to prove, sprinkle with streusel or almonds and bake in a brisk oven.

Coffeecake should be baked in a good even heat of about 350 degrees to 400 degrees F.; a flash heat is apt to color too much before the cake is done. If the oven bakes more on the bottom than on the top another pan may be slipped under to prevent burning.

COFFEECAKE NO. 2.

Five pounds of milk sponge; twelve ounces butter; ten ounces sugar; five eggs; lemon extract; mace. Work this into the sponge, add more flour to form a slack dough; beat it up well and set to prove. Let it come up and work over; scale and make into cakes.

For Almond Coffeecake add to the above mixture one pound of sweet almonds and one ounce of bitter almonds, blanched and chopped fine. Sprinkle the almonds on top before baking, or bake first, then ice over and sprinkle with slightly browned chopped almonds before the icing gets dry.

PLAIN COFFEECAKE.

Three quarts milk; eight ounces yeast; six eggs; thirty ounces sugar; thirty ounces butter and lard; lemon and mace; one ounce salt. Proceed as in the former recipes; or make a straight dough with the ingredients given.

RAISIN COFFEECAKE.

To five pounds of plain coffeecake add two pounds of sultana raisins, or one pound of raisins and one of currants; almonds, citron and orange peel may also be added for variety, and the cake named accordingly. for fruitcakes the top may be left plain, or sprinkled with almonds and iced over to suit the taste.

GERMAN POTATO COFFEECAKE.

The potatoes used for this cake are boiled whole, then peeled and set aside to get cold; they are grated and added to the dough when the flour is all worked in. A good strong lemon and mace flavor goes very nicely with this cake.

One quart milk; four ounces yeast; three fourth pound sugar; one pound butter; four eggs; two pounds grated and boiled potatoes; one half ounce salt; lemon and mace. Set a light sponge with

the milk and yeast. When the sponge is ready make a nice slack dough; add the potatoes the last thing. Let prove up and work over once, then scale and roll into flat sheets the size of the pan. Brush over with warm, melted butter; give some proof, then take a pastry jagger, or dough wheel, and mark the sheets into squares, to sell for five cents each. Give good proof and bake in a good brisk oven. Wash again with butter. When done dust with powdered sugar. This is a very nice light cake, which is sold in large quantities in Saxon bakeries.

The coffeecakes can be made less expensive by reducing the ingredients, also by using half lard instead of all butter. Fewer eggs may be used or coloring substituted. For good coffeecakes it is better to use the recipes as given. The standard doughs are also used for coffeecakes, but with a slacker dough.

For the fresh-fruit coffeecakes the dough is rolled out about one half inch in thickness, given a little proof, then the fruit is laid on. The apples are cut in thin slices, peaches and plums are put on in halves, the cherries and the other berries are spread on whole, sugar is added and the cakes given some more proof, and then they are baked in a good brisk heat. Some bakers use a cream on top of the fruit, something like a custard or pastry cream, and the cakes are baked with this custard, which makes a very nice cake.

FRENCH COFFEECAKES.

For French coffeecakes, tea rolls, and butter pretzel or "blunder pretzels," a plain standard or bun dough is used, into which more butter or butter and lard is rolled in, as for puffpaste, which give these goods a flaky and leafy appearance when baked. To each pound of ready dough take from three to six ounces of butter to roll in, or make a special dough in the following manner: One quart milk; four ounces yeast; ten ounces butter; ten ounces sugar; eight eggs; lemon extract; mace. Make a straight dough, or set a sponge as usual, with the ingredients given. Make the dough about medium, and let it come up and work over twice; set in a cool place to stiffen up for one hour. Then proceed to roll in more butter. For each pound of dough take four ounces of firm butter, cold and of the same consistency as the dough. Roll the dough in a long sheet, about three times as long as it is wide. Spread the butter in little pats over two thirds of the dough, fold in the other third left bare over half of the buttered part, and then fold the other part on the top of this, to enclose the butter. Roll out again into a thin

sheet, fold again into three, set away for fifteen minutes to rest and cool, then give two more turns of three folds each, and the dough is ready for use.

All rolled-in goods should be treated cool and not proved in a very warm closet or in steam, because the heat would cause the butter to run and make the goods fat. The ordinary temperature of the shop is sufficient, but keep covered and out of drafts, to prevent crusting.

These cakes are made in different sizes, and sell at five and ten cents each, and also three for ten cents. Take the prepared dough, roll into a sheet about half an inch thick and eighteen inches long, cut into long strips one inch wide and the length of the sheet; give each strip a twist and form into a coil; fold the end under; set on pans so the cakes do not touch in baking; give good proof; wash with eggwash and bake in a brisk heat. Ice with a vanilla water icing when done.

POTATO CREAM CAKE.

Two and one half pounds of boiled and grated potatoes; eight ounces flour; twelve ounces butter; one half pint of cream or milk; six ounces of sugar; eight eggs; a little powdered cinnamon. Roll out a bottom for the cake from plain cake dough; press up well on the sides and set to prove. While proving prepare the potato cream. Separate the eggs, beat the yolks and sugar together, and add gradually to the grated potatoes; sift on the flour; beat up again; mix in the melted butter and flavor. Mix in the whites of eggs, beaten stiff; spread this cream over the cake evenly about one inch thick, and bake in a good heat. Sift over with powdered sugar and cinnamon when done.

FRENCH TEA ROLLS.

From the prepared dough roll a sheet about one-half inch thick and cut in strips eight inches long and three-quarters of an inch wide; give each strip a spiral twist and double up in rope fashion; set on pans so they touch lightly on the sides in baking; let prove; wash over and bake in a good heat; finish like the coffee-cake. These cakes sell at two for five cents, and also at twelve cents the dozen.

BUTTER PRETZEL.

The pretzels are made to sell at five and ten cents each, and also three for ten cents. Take a sheet of the prepared dough, cut

into long strips of fourteen inches, and one inch wide; give each strip a twist and form into pretzels; set on pans; prove; wash and bake like the other cake; ice when done.

GERMAN KRANZKUCHEN.

There are several ways of making these cakes; they range in prices from ten to twenty-five cents and more.

No. 1—Take a piece of the prepared dough, roll out one inch thick and cut in strips eighteen inches long and two inches wide; give the strip a twist, and form into a large ring; join the ends nicely together; set on pans; prove, wash and sprinkle with chopped almonds; bake in a medium heat; ice over when done, or wash with butter, and dust with powdered sugar and cinnamon.

No. 2—Take a piece of standard dough and roll into a thin sheet, say one-quarter inch thick, eighteen inches long and ten inches wide. Cream together four ounces of butter and six ounces of sugar; flavor with lemon and mace; spread this on the sheet; sprinkle with Sultana raisins, currants and chopped citron; roll the sheet up like a jelly roll; set on pan and form a large ring; flatten a little and set to prove. (This is for a large size Kranzkuchen, but may be made in smaller sizes if desired.) When half proved, take a sharp knife or a pair of scissors, and cut the top in zigzag shape; cut almost to the center of the roll; finish proving and bake in a medium heat. Brush with melted butter and dust with sugar and cinnamon when done. The cake may also be washed before baking, and sprinkled with shredded almonds and iced after baking.

GERMAN CHEESECAKES (QUARKKUCHEN).

Three pounds of dry cheese curd; eight eggs; eight ounces sugar; six ounces butter; one half pint milk; three ounces flour; six ounces sultana raisins; six ounces currants; four ounces chopped almonds; a little saffron; one lemon rind; mace. Roll out the bottom for the cake from plain cake dough; let it come up well on the sides; roll about one quarter inch thick. Set to prove. While it is proving, separate the eggs, dissolve the saffron, and rub the cheese through a sieve; mix in by degrees the yolks, sugar and flour, add the saffron, mace and the grated rind of the lemon; also the melted butter and the fruit, and then the whites of egg beaten to a froth. Spread the mixture evenly over the pan, dust some powdered cinnamon over, and bake in a medium heat. Sift powdered sugar over when done. The mixture will puff up in baking and fall a little when done, but without detriment to the cake.

No. 2.—Three pounds cheese; eight ounces sugar; six ounces butter; three ounces flour; eight ounces of currants; four yolks; four whole eggs; one fourth pint milk; lemon flavor and mace. Roll out a sheet as in the previous recipe; rub the cheese through a sieve; cream the butter, sugar and eggs and mix into the cheese; add the flour and flavor, and thin up with the milk. Spread on the cake; sprinkle the currants on top and dust with cinnamon. Bake in a brisk heat. Sift over with powdered sugar when done.

GERMAN CREAM CAKE.

This cake is similar to the cheesecake, and is baked in the same manner. The sheet is rolled out thin and proved, and the mixture is spread on. Melt eight ounces of butter, take off the salt and let it cool again. Beat into it by degrees six yolks and one whole egg; add five ounces of sugar, one ounce of bitter almonds, chopped very fine; add the grated rind of one lemon, flavor with mace and cinnamon. Spread this mixture evenly over the cakes, sprinkle with sultana raisins and some finely sliced almonds, and bake in a medium oven. Dust with powdered sugar when done.

No. 2.—One quart milk; sixteen eggs; four ounces butter; one and one half pounds sugar; four ounces cornstarch; four ounces sultana raisins; four ounces currants; vanilla flavor. Roll out the sheet and set to prove. Set the milk and butter and one pound of sugar to boil. Mix the other sugar and starch together and stir in the eggs by degrees; beat it up well, and when the milk is boiling pour it on the starch, sugar and eggs; add the vanilla; sprinkle the currants and raisins on the bottom of the cake; spread the cream over evenly. Bake in a medium heat to a nice color and dust with powdered sugar when done.

WREATHS.

Wreaths are made in ten and fifteen-cent sizes. They may be made from the prepared dough, and also from the plain standard doughs. Take any of the doughs mentioned and roll out into one inch thickness; cut into strips from eighteen to twenty-four inches long and one inch wide; take three or four strips and plait into a long, even strand; form this into a ring or wreath, join the ends and set on the pan; prove and wash over; sprinkle with shredded almonds and bake to a nice color. Ice with a vanilla or lemon icing when done and while hot.

SNAILS.

Take some prepared dough; roll into a sheet about a quarter-inch thick, twelve inches wide and of any length; brush over with butter, and dredge with powdered sugar; sprinkle with currants, cinnamon and finely chopped citron or almonds. Roll up the sheet like a jelly roll; brush the roll over with butter and cut up with a sharp knife into half inch slices; set on pans the cut side up, so they touch lightly on the sides in baking; prove; wash over and bake in a brisk heat; ice over or dust with powdered sugar when done. The other way of making the snails is to take plain standard or bun dough, roll out as in the former recipe; brush over with lard or butter; sprinkle with sugar and fruit and cut like the others, but set closer together, so they bake in squares. Brushing the roll with lard on the outside before cutting makes the cakes separate nicely when baked. They may be dipped in granulated sugar before baking, or iced afterwards.

Either shape may be made from the same roll. Cut the slices one inch thick; take a small rolling-pin, about twice as thick as a pencil, press down in the center in such a way that both cut sides turn up and form two oval coils; set on pans so they touch lightly in baking; prove and bake like other snails. These rolls can be made to sell at ten and twenty cents per dozen.

Another way is to make a roll of the dough of a smaller diameter, flatten it some, and cut into three-inch pieces; set the slices on pans, and on each side cut half through, about one inch long, turn the cut side out and set to prove; wash and bake like the other buns. A much cheaper article can be made from the plain roll doughs and from common bun dough, using lard instead of butter. All the shapes may be made, as given above, and of a nice appearance. In localities where quantity rules above quality this makes a nice variety of rolls and buns, larger pieces but inferior in quality.

GUGELHUPF; NAPFKUCHEN; BABA.

The best grades of these large yeast-raised cakes are made like rich pound cakes; the butter and sugar are creamed, the beaten eggs, yeast and flour added, then they are filled in forms, raised and baked. For the other grades a sponge is set as usual, and the ingredients are added as in other cakes.

GERMAN NAPFKUCHEN.

No. 1—One pound six ounces of flour; one-half pound of sugar; two ounces of yeast; one pound of butter; the grated rind of one lemon; sixteen yolks of eggs; twelve whites of eggs; four ounces of shredded almonds. Dissolve the yeast in a little warm milk; cream the butter and sugar very light; add the yolks by degrees, then the lemon rind, and yeast, and mix in the flour; draw in the whites of eggs beaten to a stiff froth. Brush the cakemould thick with butter and sprinkle with the shredded almonds; fill the mould about half with the mixture and set to rise till the mould is nearly full; bake for one hour in a medium heat to a nice brown color; dust with powdered sugar and cinnamon while hot, or ice with a vanilla or lemon icing.

BERLIN NAPFKUCHEN (PLAIN).

Two and one-half pounds of flour; one-half pint of milk; two ounces yeast; six eggs; six ounces sugar; eight ounces butter; one pint warm milk; one-half pound raisins and currants; two ounces sliced almonds; lemon extract; mace. Set a warm sponge with the half pint of milk, yeast and parts of the flour. When ready add the one pint of warm milk, also the eggs and sugar; work well in the flour and butter, raisins and currants; work the dough very nice and smooth; let it rise up and work over. Brush the form with butter and sprinkle with the sliced almonds; fill the mould half with the mixture; let rise and bake in a medium hot oven. When done turn out of the moulds, brush with butter and dust with powdered sugar and cinnamon.

BERLIN NAPFKUCHEN (PLAIN).

No. 2—One pound of flour; two ounces yeast (dissolved); four ounces sugar; lemon extract and mace; 4 whole eggs; four ounces raisins; four ounces currants; four yolks; three ounces citron; three almonds. Prepare like No. 1.

DRESDEN BABA.

No. 3—One pound butter; eleven whole eggs; four yolks; one-half pound sugar; the grated rind of one lemon; two pounds of flour; one-half pint of cream; two ounces of yeast. Prepare like No. 1.

FRENCH BABA AND SAVARIN CAKES.

The French and also the Polish babas are made in the same manner as the German mixtures for No. 1, 2, 3, with this difference,

for the French Baba only sultana or seeded Malaga raisins are used; and in the Polish Baba mixture, raisins, citron and currants are used, with a strong flavor and color of India saffron. The cakes are iced or dusted with powdered sugar when done. The French Savarin cake is also made out of the same mixtures, only the fruit is left out. This cake after it is baked is saturated with a thin syrup which contains Maraschino liquor and is served in this manner. The babas are baked in plain straight sided form with a wide center tube in them.

AMERICAN KAUGLAUFF, OR BUNDKUCHEN.

No. 1—One quart milk; two and one-half ounces yeast; four pounds of flour; twelve eggs; one pound of butter; one pound of sugar; twelve pounds raisins; one-half pound currants; four ounces citron; lemon extract and mace.

No. 2—One quart of milk, three ounces yeast; four pounds of flour; sixteen eggs; twelve ounces sugar; one and one-half pounds of butter; one-half pound of sultana raisins; four ounces citron; four ounces of chopped almonds. For both recipes set a warm sponge with one pint of milk, the yeast and part of the flour. When the sponge is ready add the other pint of milk and work in the flour; then add the other ingredients in the following manner: Cream the sugar and butter, add the beaten eggs and flavor and work this in the dough, then add the fruit the last thing. Let this dough come up and work down; butter the forms well; sprinkle with almonds; fill in the mixture; give good proof and bake in a medium heat. Ice with lemon or vanilla icing, or dust with powdered sugar while hot.

The Bundkuchen can be made also from any of the standard doughs, by making the doughs richer and very slack, or from a milk sponge, for which I give here some recipes:

No. 1—Take five pounds of standard dough; work in three-quarter pound of butter; six ounces of sugar; eight eggs; one-half pound of raisins; one-half pound of currants. Let this dough come up once and work down, and fill in the moulds like the other mixtures. Bake in the same manner.

No. 2—Take eight pounds of milk sponge, work in one pound of sugar; one pound of butter; eight eggs; flavor with lemon and mace, and add one pound raisins; one pound currants; one-half pound citron. Add a little more flour to make a very slack dough;

let come up once; fill in buttered forms; prove and bake like the other cakes.

No. 3—Take five pounds of milk sponge; one pound butter; three-quarter pound sugar; one and one-half pint eggs; one-half pound of chopped almonds; flavor with lemon and mace. Beat the ingredients into the sponge. Butter the moulds and fill the mixture in at once; let rise and bake like the German Napfkuchen.

All these mixtures should be made very slack,—just thick enough so the fruit does not sink in baking.

Doughnuts, Muffins and Griddle Cakes.

YEAST-RAISED DOUGHNUTS.

Doughnuts can be made from any ordinary roll dough which contains sweetening. The better grades are made from the standard doughs given in previous recipes, and a very light slack dough with little shortening makes a very nice article. In Germany the doughnuts are called krapfen in the South, and in Central and Northern Germany they are called pfankuchen (pancake). The doughnuts called Bismarcks are identical with the Berlin pfankuchen. Doughnuts are fried in hot lard and also in vegetable compounds. The lard should have the right degree of heat when they are put in, otherwise the grease will soak in the cakes and make them unfit for use, and cause a larger consumption of grease and loss of profit. One other point which should be watched in frying the cakes is the proof; if the cakes are given full proof, or, in baking powder raised doughnuts, made too light, they get too porous and soak in the grease in frying. If the grease is too hot it will cause a smaller cake, by forming the crust too quick (not having sufficient time to expand), and also causing the bursting on top and the breaking through of the raw, uncooked dough on the sides, just as a loaf of bread bursts in the oven if given half proof and is then baked in a quick heat. Doughnuts made from cheap grades of dough require a hotter grease than the richer kind.

DOUGHNUTS—NO. I.

Two quarts milk; two ounces yeast; twelve ounces sugar; twelve ounces butter; six eggs; half ounce salt; lemon extract; mace. Make a very slack sponge, lukewarm, with the milk and yeast and some good patent flour. When the sponge is ready work in the other ingredients, and with more flour make a smooth dough. Let it come up once and work over. Roll out into a sheet about one third of an inch thick and cut into rings, plain rounds or long squares; set on cloth-lined trays to prove, and fry as directed.

Bismarcks are often called jelly doughnuts; they are best if filled with jam. It is not advisable to use jelly if they are filled before frying, because it melts and soaks through the cakes, runs out in frying and makes a bad-looking cake. Jam is more substantial and stays in the cakes. Doughnuts may be filled with jelly after they are fried, with one of the patent fillers which are used for cream puffs, or by using a bag and small tube.

DOUGHNUTS—NO. 2.

Ten pounds of sponge dough; one pound of butter and lard; four eggs; three fourths pound sugar; lemon extract; mace. Work the ingredients into the sponge; add more flour, and make a smooth dough; cut out; prove and fry as directed.

BISMARCKS.

The genuine Bismarcks are made of a richer mixture; they are made small and filled with a good preserve or fruit jam, but raised and fried like the doughnuts.

One quart milk; four ounces yeast; one pound four ounces butter; twelve ounces sugar; twelve eggs; the grated rind of one lemon; a little mace; half ounce salt. Set a warm slack sponge with yeast, milk and a good strong flour. Work the other ingredients in the sponge when it is ready, adding more flour to make a nice slack dough. Let it come up and work over twice. Ball up round in one ounce pieces, and set on the board or bench; give a little proof; pull each piece a little apart to make a cavity in the center; put a dot of jam into the impression and pinch up the dough over the jam so it will not run out in frying. Set the pinched side down on cloth-lined trays; prove and fry to a nice brown; dust with powdered sugar and cinnamon while hot.

VIENNA KRAPFEN.

The Vienna Krapfen may be made from the same mixture as given for the Berlin pfankuchen. The original mixture is more like the Vienna Brioche dough; it contains more eggs—that is, yolks only; the whites being left out. The krapfen are not balled round; the dough is rolled into a thin sheet about one-quarter inch thick. With a round cutter the dough is cut up in pieces. Half the pieces are washed with egg or milk; some apricot jam or other preserve is placed in the center. The other half of the cut out pieces are placed on the top, the sides pressed together to enclose the jam, and with a smaller sized cutter each of the krapfen is trimmed even; they are set to prove and fried like the Bismarcks.

DRESDEN CHEESEPUFFS, OR KASEKEULCHEN.

These cakes are made in the same manner as the Bismarcks, only instead of jam, they are filled with a cheesecake mixture like the following: Two and a half pounds of cheese curd; six ounces sugar; six yolks; one cup of cream; four ounces butter; grated rind of two lemons; six ounces currants; four ounces citron; four ounces almonds, chopped fine. Force the cheese through a sieve; melt the butter, and work the ingredients together and use for filling. The same filling may be used for cheese tartlets and cheesecakes.

DOUGHNUTS OR CRULLERS WITH BAKING POWDER.

No. 1.—Two pounds flour; one ounce good baking powder; four ounces butter; eight yolks; two whole eggs; six ounces sugar; one half pint milk; flavor, lemon extract; mace.

No. 2.—Three pounds flour; one and a half ounces baking powder; six ounces butter; eight ounces sugar; eight eggs; one and a half pints milk; lemon and mace.

No. 3.—Four pounds flour; two ounces baking powder; one pound sugar; four ounces butter; four eggs; one quart milk; a little salt; flavor.

Sift the baking powder in the flour; cream the butter and sugar and eggs; mix like tea biscuits, rather slack; roll and cut with ring cutter or cruller cutter like other doughnuts; set in box and cover up to prevent drying, and fry at once. Dust with sugar when done or ice over. The plain doughnuts generally sell for ten cents per dozen; the iced ones sell for twelve cents.

FRENCH CRULLERS.

One quart milk and water; one pound lard; one and a fourth pounds flour; one quart eggs. This mixture is made just like a cream-puff mixture. It should be made firm enough so the dressed up rings keep in shape without running flat. Sift the flour; put the lard into the milk and water; let come to a boil; stir in the flour and take off the fire. Put the hot paste into a bowl and let it cool a little; work in the eggs while the paste is warm. Do not use all the eggs if the mixture gets too soft. Put in a bag, and with a large star tube dress in rings on round pieces of greased paper the size of the frying pan. Turn them over into the hot grease. The paper will come off in a short time; take it out to dress more of the cake on it; turn the crullers over several times till done. If not sufficiently cooked they shrink. Ice over with vanilla icing when done. The

rings should be made rather small to sell ten cents per dozen, to leave some profit for the baker. Some very practical inventions for frying crullers and doughnuts in large quantities are in the market. The cakes are fried under the grease and need no turning, coloring them evenly on both sides at once, which saves a good deal of time.

MUFFINS AND CRUMPETS.

English muffins can be made from any white bread sponge, which has reached the first drop, by adding the amount of salt generally used for bread. This saves the making of a special sponge, where the muffins are made in very small quantities. They are baked on a hot iron griddle or plate. The gas heated griddle seen at restaurants is the most convenient for this purpose. With 1 gallon of water; 2 ounces of yeast, and 3 ounces of salt, make a very soft dough luke warm; use a good bread flour; work the dough well but make it slack like a sponge. Let it rise; and when it reaches the drop, beat it down again and let it come up a little. Prepare some trays or bread boxes filled with sifted flour about three inches deep. Take a muffin cup and make half round impressions in the flour a little distance apart. Drop the dough out in two ounce pieces by hand (just like dropcake) into the impressions made in the flour; dust over, cover and set to prove. When proved up to double size, lift out carefully from the flour; flatten somewhat and put on the griddle to bake; turn over carefully when about half done and finish baking. These muffins should be turned just at the right moment. If turned too soon they become flat and the dough breaks through on the sides. If turned too late they get round on the top and lose the proper shape.

Another and more practical way has been adopted in hotels, which I think gives a better looking muffin with less trouble. The muffins are made from the same mixture as in the foregoing recipe; sometimes half milk is used instead of water, and the mixture is made still slacker. The muffins are baked in the same manner, but in rings, just like the English crumpets. They are also raised with baking powder in some places, but are better if raised with yeast or ferment.

ENGLISH MUFFINS IN RINGS.

Four ounces of flour; 2 ounces of yeast; 1 quart water; 1 quart of milk; 1 ounce of salt. Make a sponge or slack dough with the

ingredients and proceed as in the former recipe, only have the batter softer. When the batter is coming up the second time, have the griddle hot, take muffin rings three inches in diameter and one inch high; grease well and set on griddle; put the batter in a funnel dropper, or in a custard dipper, and fill each ring about half full with the batter. It will raise up and fill the ring. As soon as it becomes dry on the sides and is baked sufficiently on the bottom, turn over carefully; after a minute remove the rings and finish baking. The muffins should be pulled into halves (not cut), slightly toasted and eaten with butter.

MUFFINS WITH BAKING POWDER.

Two pounds of flour; 2 ounces of baking powder; 4 ounces of butter; 4 eggs; 1 quart of milk; ½ ounce of salt. Mix the ingredients well together into a batter; bake in greased rings

SALLY LUNN.

Two quarts of milk; 2 ounces of yeast; ½ ounce salt; 12 ounces of sugar; 12 ounces of butter; 8 eggs; mace. Set a warm sponge with three pints of milk and the yeast. When ready put on the remaining pint of milk, eggs, sugar and salt, add the melted butter, and make a rather slack, smooth dough. Let it prove up once and work over; scale into half pound pieces; mould round; set on pie or layer cake tins; flatten out on the tins and give some proof; wash over with melted butter; and with the dough scraper cut each round in four pieces. Set back to finish proving and bake in a good heat. The brushing with butter makes the cuts separate nicely and the Sallys can be sold whole or in single pieces.

SALLY LUNN MUFFINS.

Four pounds of flour; 3 ounces of baking powder; 3 pints milk; 6 ounces of sugar; 8 ounces butter; 8 eggs; ½ ounce of salt. Sift the baking powder in the flour. Beat the eggs, sugar and salt together; melt the butter, and mix all the ingredients into a batter. Bake in well-greased muffin cups in a medium heat.

YEAST RAISED MUFFINS; (SWEET BISCUIT.)

Four pounds of flour; 1½ ounces of yeast; ½ ounce salt; 3 pints of milk; 8 eggs; 12 ounces of butter; 8 ounces of sugar; flour; mace. Set a sponge as usual, with two pints of the milk and two pounds

of the flour and yeast. When ready add the remaining milk and the other ingredients; make a very soft dough; let come up and beat down. Prepare a flat pan; grease it and set on as many small muffin rings, one inch high and two inches in diameter, as the pan will hold; grease well and fill about half full with the mixture. Let it prove up full and bake in a good heat of about 400 degrees Fah.

CORN MUFFINS.

One pound of cornmeal; two pounds of wheat flour; three ounces of baking powder; twelve ounces of sugar; five ounces of butter; one quart of milk; eight eggs; a pinch of salt. Sift the flour and baking powder; rub the sugar and butter with the eggs; add the milk, and mix with the flour and meal; fill in well-greased muffin moulds, and bake in a medium heat. The quantity given makes forty muffins.

CRUMPETS.

Four pounds of flour; 2 ounces of yeast; 2 quarts of milk and water; 1 ounce of salt; 4 ounces of butter; 4 ounces of sugar. Set a sponge as for English muffins with water and milk. When ready work in the butter, sugar and salt. Bake on the hot griddle in greased rings of a smaller size. The turning must be done carefully. They are split and toasted like the muffins.

CRUMPETS WITH BAKING POWDER.

Two pounds of flour; 1½ ounces of baking powder; 2 ounces of butter; 2 ounces of sugar or molasses; ½ ounce of salt; 1 quart water and milk. Sift the baking powder, sugar and salt into the flour; add the milk and water by degrees; beat up well into a smooth thick batter; add the melted butter; bake in greased rings on the griddle. Crumpets are also baked in flat cakes without rings, like buckwheat cakes. The batter is thinned up with more milk to make them run flat; they are turned over on the griddle just like the other cakes. If a few eggs are used it improves them wonderfully. Sometimes ground cinnamon is used.

BISCUITS, GRIDDLE CAKES, ETC.

A large variety of biscuits can be made from the following two mixtures, by adding different fruits, egg and nuts, and also by increasing the amount of sugar and shortening. A good winter-wheat flour, or half spring and winter wheat, makes the best biscuits. The dough should be made soft and smooth.

For the plain tea biscuit one ounce of baking powder and two ounces of shortening (either butter or lard) is used. If all milk is used in mixing no sugar is required for plain biscuit, otherwise one ounce of sugar and three ounces of shortening should be taken to one pound of flour.

TEA BISCUIT.

No. 1.—Three pounds flour; 3 ounces baking powder; 6 ounces butter or lard; 2 ounces of sugar; ½ ounce salt; 1 quart milk.

No. 2.—Twelve pounds of flour; 1 gallon milk; 6 ounces salt; 8 ounces of cream of tartar; 3 ounces of soda; 2 pounds of lard; (or use 12 ounces of baking powder instead of soda and cream of tartar); mix the powder, sugar and salt in the flour, sift in the bowl. The lard may be rubbed in a part of the flour or may be melted and mixed in the flour with the milk. Make a nice smooth dough, dust some flour on the table; throw out the dough and fold into a square piece; flatten on the table and roll out evenly about one-half inch thick. Let the rolled-out sheet rest for a minute to lose its springiness; cut out into biscuits; set in rows on the pan; wash with a thin egg wash, and bake in a good heat of 350 degrees Fah.

SCOTCH SCONES.

Four pounds of flour; eight ounces of sugar; eight ounces of butter; one quart of milk; one and one-quarter ounces of bicarbonate of soda; two and one-quarter ounces of cream of tartar, or four ounces of good baking powder. Rub the butter in one-half of the flour; sift the sugar, cream of tartar and soda into the other half; mix together and then mix with milk into a medium dough. Work this dough well for a couple of minutes, then scale in twelve-ounce pieces; mould the pieces round and roll out the size of layer cake tins; cut each with the scraper into four pieces and place on large layer cake or pie tins so the cut sides do not touch in baking; prick or dock each piece with a fork and set in a damp warm proof box for half an hour, then wash the top with egg-wash and bake in a good heat. If sour milk or buttermilk is used take one ounce of soda and two of cream of tartar only for the same mixture. Plain scones are made without sugar. Use four pounds flour, one ounce of soda, two ounces of cream of tartar, one ounce of salt, eight ounces of lard, one quart of sour milk and bake like the other scones. Raisin scones and currant scones are made after the same recipes, about twelve ounces of fruit is added and sometimes a

couple of yolks with a pinch of mace. The mixture should be handled quickly, so they get into the proof box before the chemicals work out; they should be light colored on the sides and have a nice brown top when baked.

AMERICAN BUTTER CAKES.

These cakes are very popular in some restaurants. They are baked and eaten like the English muffins. The cakes are a little difficult to make, because the same mixture does not work always alike. This is caused by the difference of the acidity of the milk, which requires more or less soda or a small addition of cream of tartar to give the cake the right degree of lightness.

Four pounds of flour, three pints of buttermilk, or sour milk; half an ounce of bicarbonate soda; half an ounce of salt; two yolks of eggs; two ounces of melted butter. Take half cake and half bread flour, sift with the soda and salt three times, make a bay in the center of the flour, put in two pints of the milk, the yolks and the butter, draw in all the flour and add the rest of the milk to make it like a slack smooth biscuit dough. Work this dough well, dust some flour on the board and flatten the dough with the hands, let it rest till the dough loses its springiness, then roll out to about three quarters of an inch in thickness; let rest for a minute, then cut out into biscuits with a three inch cutter; set the biscuits or cakes in clothlined dusted boxes; cover and let rise in a cool place till they are risen to about one inch of thickness, then lift out carefully and bake on the hot plate or griddle on both sides like the English muffins. These cakes are pulled or divided in halves and well buttered and eaten while hot.

NEW YORK BUTTER CAKES.

Some other kinds of butter cake are made in New York but they are not baked on the griddle, they are made in the following manner: Take one quart of milk; one pound of flour; eight ounces of butter, and eight ounces of sugar. Put the milk, sugar and butter in a vessel on the fire and let it come to a boil; when it is boiling add the sifted flour, stirring it in well with an egg beater; take it off the fire and put in a wooden bowl; let cool till you can hold your hand in it, then mix into it by degrees five whole eggs and five yolks. Add to this mixture two and one-half pounds of white bread sponge, or milk sponge, and sufficient flour to make it like a tea biscuit dough. Let this dough rest, and prove on for half

an hour; roll into a sheet and cut into large biscuits; eggwash and lay in granulated sugar; set on pans single; let it prove, and bake to a nice color.

YEAST-RAISED GRIDDLE CAKES.

On the same principle as the English crumpets are made (given in the foregoing recipes) a very nice yeast-raised wheat cake and also corn cake can be made, which is far superior to the baking powder raised griddle cake generally made in restaurants. The buckwheat cakes are often raisd with yeast, but very few attempt to raise wheat and corn cakes in this manner. It is a little more troublesome, but it pays in the long run. Set a sponge in the evening, or early in the morning, and when it is ready take for each pound of flour used in the batter two ounces of sugar; two eggs, and one ounce of melted butter. Thin it up with milk the thickness of a soft batter; give time to raise up again; and bake like the other griddle cakes. The ready batter should be kept cool to prevent souring, and a spoonful of soda may be stirred in as a preventative.

YEAST-RAISED BUCKWHEAT CAKES.

Four pounds of buckwheat flour; four quarts of water; two ounces of compressed yeast; half an ounce of salt; one cupful of molasses; four ounces of melted butter. Make a soft sponge or batter with the flour, yeast and water, and let it stand over night. In the morning add the other ingredients and make a medium batter. A pinch of soda may be added; and some people prefer a little cornmeal or wheat flour in the batter. Bake on the griddle like wheat cakes.

BUCKWHEAT CAKES WITH BAKING POWDER.

Three pounds of buckwheat flour; one pound of wheat flour; four ounces of baking powder; a pinch of soda; half an ounce of salt; half a pint of molasses; four ounces of butter. Mix with milk or water. Sift the baking powder with the flour; add the molasses and soda dissolved in the water; mix into a soft batter; then add the melted butter. Bake like the other griddle cake.

WHEAT GRIDDLE CAKES WITH BAKING POWDER.

Two pounds of flour; four ounces of sugar; two ounces of baking powder; two ounces of melted butter; salt; four eggs; milk to mix.

CORN GRIDDLE CAKES.

One pound of cornmeal; one pound wheat flour; two ounces of baking powder; four ounces of sugar, or syrups; a pinch of salt; four eggs; two ounces of melted butter.

GRAHAM GRIDDLE CAKES.

One pound of graham flour; one pound of wheat flour; two ounces of baking powder; four ounces of sugar or molasses; four eggs; two ounces of butter; a pinch of salt. Mix the flour and baking powder and sift with the sugar and salt. Mix with milk to a batter; add the beaten eggs and last the melted butter. Bake on a well greased hot griddle or hot plate.

Rice cakes are made by adding boiled rice to the wheat cake batter.

Yeasts, and Their Use.

COMPRESSED YEAST.

Compressed yeast has taken the place of the old fashioned stock yeast and of the potato ferment, but the latter is still used by many bakers because they claim it makes better bread and keeps it moister. Stock yeast and ferment-made breads have a better flavor; and bakers using compressed yeast frequently use malt extract, potato flour and also glucose to supply the lacking flavor. They also use scalded cornmeal, and rice flour is added to keep the bread moist.

Compressed yeast should always be used fresh; but in places where it cannot be had regularly it may be kept for months if covered with cold water in a jar and the jar kept in a cool place. Before using, the water should be drawn off carefully, the amount of yeast wanted taken out by means of a spoon, and fresh cold water put on the remaining yeast. It is best kept in the ice box and the water changed twice a week. If the water gets too warm the yeast will spoil because it will rise to the top and be exposed to the air. Yeast will also keep for a long time if slightly frozen. Before using it should be thawed slowly in cold water.

Yeast develops best at a temperature of from 75 degrees to 90 degrees Fahrenheit. Excessive heat will spoil the yeast; therefore care has to be taken in dissolving the yeast to secure the right temperature of the water before adding the yeast.

Compressed yeast is used for setting sponge and also for straight dough. It is used to start stock yeast and to make potato ferment. Virgin yeast or maiden yeast can be made in any quantity, but it takes more time to make it, and even in distilleries some yeast of previous batches is retained to be used for a start to the next batch.

MAIDEN YEAST.

Maiden yeast for bakers' use may be made on a small scale in this manner: Take a handful of hops and boil in a quart of water for half an hour. Strain off the hops and put in a strong bottle with

a good handful of malt and a little sugar. Cork up and tie securely with wire, and let it stand in a warm place for two days and two nights; then it will be ready to start about two gallons of stock with.

Other recipes for maiden yeast (or malt yeast) are added:

No. 2. Boil eight ounces of hops in four gallons of water for one hour. Cool to 170 degrees Fahrenheit and mash with six pounds of malt. Strain in a long narrow tub like an ice cream tub. Add eight ounces of sugar and set (close-covered) in a warm place. Fermentation begins in a day, and in forty-eight hours, or when the fermentation ceases, it is ready for use. This makes a strong malt yeast if stocked with two quarts of previous stock yeast, or with four ounces of compressed yeast.

No. 3. Boil eight ounces of hops with four gallons of water for half hour; cool to 165 degrees Fahrenheit; add ten pounds of malt, and leave covered up for three hours. Strain off and wash the malt with some cold water; add four ounces of salt, and cool to 80 degrees Fahrenheit. Stock away with two quarts of old stock, or with four ounces compressed yeast.

No. 4. Boil four ounces of hops in four gallons of water for half an hour; cool to 165 degrees Fahrenheit; add six pounds of malt; cover for three hours; strain, and add three ounces of salt and four ounces of sugar; cool to 80 degrees Fahrenheit, and stock with two quarts of stock or four ounces of compressed yeast. This yeast will be ready in from thirty-six to forty-eight hours.

STOCK YEAST.

Stock yeast is used to start ferment, and generally in the proportion of one quart of stock to four gallons of ferment. Three recipes for making it are given:

No. 1. Boil half a pound of hops in six gallons of water for one hour; strain and pour some of the water on four pounds of flour to scald it. Cool till blood warm; rub the scalded flour fine; add the rest of the hop liquor; add to this four pounds of malt and one-half pound of sugar; when luke warm add one quart of maiden yeast or four ounces of compressed yeast. Let this stand from thirty-six to forty-eight hours without disturbing, and it will be ready to make ferment with. This stock yeast will keep for a month in a cool place, and can be used to make new stock with, but then a quart should be taken out after it is ready, a teaspoonful of baking soda added and put in a jar in the ice box.

No. 2. Boil half a pound of hops in six gallons of water for

one hour; strain and pour some of the water on four pounds of flour to scald it. Cool till blood warm; rub the scalded flour fine; add the rest of the liquor. Add to this four pounds of malt and half a pound of sugar; cool till lukewarm and stock away with from six to eight cakes of dry yeast, which has previously been dissolved in warm water. Let this stand covered without disturbing from twenty-four to thirty-six hours or until fermentation ceases, then it is ready for use. Before using stir it up well. This yeast can be used to set sponge with by taking two quarts to the pail of sponge; or better to make potato ferment with it.

No. 3. Boil two ounces of hops for twenty minutes in one gallon of water; strain upon two pounds of flour and one pound of malt. Mash and cool to 85 degrees Fahrenheit. Stock with two ounces compressed yeast, or two quarts of previous stock yeast, or eight dry yeast cakes. Let it stand in a warm place undisturbed, and it will be ready in twenty-four hours.

Recipes for malt and stock yeast. Both are stock yeasts. but the malt yeasts are the stronger of the two. In the stock yeasts a flour batter is used with a small quantity of malt, while in the malt yeast only malt is used without the scalded flour. The stronger malt yeast ripens the doughs more rapidly and are used for sponge and dough when a short process is desired, the same as if using compressed yeast. The stock yeasts with flour batter are also used straight for sponges, but are more used in connection with a potato ferment.

Try this recipe: Four to five ounces of hops, two pounds of malt, three and one half pounds of flour, five gallons of water, two ounces of salt, two quarts of stock yeast, or seven or eight yeast cakes or three ounces of compressed yeast. Boil the hops and water for one hour, strain and scald the flour with a part of the water into a smooth paste. Cool the rest of the water to 165 degrees, and add the malt, let it mash and cool down to 85 degrees Fahr., or about blood warm; strain and wash off the malt, add the flour paste and the stock. Put away well covered in a warm place till ready. If compressed yeast is used for stocking, it will be ready in about thirty-six hours; stock yeast or dry yeast cakes in about forty-eight hours.

The stock yeast is ready when the yeast settles to the bottom, the liquid gets clear and fermentation ceases; then the salt may be added, and the stock put in a cold place—cellar or ice-box, if possible.

Stock yeast will keep for a long time in an even, cool temperature, but atmospheric changes tend to weaken it more or less. Most of the bakers prefer to make fresh stock yeast once or twice a week. I think it is best to do so myself. I prefer compressed yeast to stock away with, because it is the most reliable. It is more uniform, and one can easily tell if it is fresh, which is not the case with the dry yeast cakes, which lose much of their strength when they get old.

When stock yeast gets old and weak, the hop liquid loses its clearness, gets muddy, but it shows more in the ferment and the sponge and does not rise as high as is usual with fresh stock. It comes up more flat, looks like old sponge, is almost lifeless, and throws off less gas. In the baked goods it appears in large irregular holes in the crumb and a dull reddish color in the crust.

FERMENT WITH COMPRESSED YEAST.

For one pail of ten quarts of ferment use two and one-half pounds of potatoes, one pound of flour, two ounces of sugar and one and one-half ounces of compressed yeast. Boil the potatoes till done; put a part of the boiling water with the potatoes in the tub, also the flour; scald this well, and mash to a fine, smooth paste; add more water to thin up and cool to make a pail of ten quarts; have it lukewarm, or about 75 degrees F.; strain and add sugar and yeast. Cover the tub close, and leave it without disturbing for from ten to twelve hours. This ferment raises like a sponge and falls when ready.

If a shorter fermentation is wanted the temperature can be raised to as high as 95 degrees F., and more yeast can be used, which would have the ferment ready in from five to six hours.

This ferment can be used for sponge and straight doughs. It may be taken straight where a strong proof is required; for longer sponges and doughs from ten to twelve quarts of water can be added without fear.

It is essential to use only good, sound potatoes; the green and sunburnt potatoes cause a bitter taste in the bread, and often injure the yeast. In fact it would be better to peel the potatoes before boiling, but this is ofen considered too much trouble, so the potatoes should be washed and brushed clean and the water changed a couple of times before boiling; and after they are mashed with the flour and thinned up with more water, the skins should be strained off before adding the yeast and starting the ferment.

POTATO FERMENTS.

No. 1.—Wash well half a peck of potatoes; boil till done; put three pounds of flour into the tub and one handful of sugar; put in the hot potatoes and part of the water; mash to a paste; thin and cool with more water (luke warm) to make up two pails, and stock away with two quarts of stock yeast. Cover and set aside. This ferment will be ready in from twelve to twenty-four hours, according to temperature. It will come up like sponge, and fall when ready. It would answer to make stock yeast once a week and save two quarts of it to stock the next week's batch, and make ferment every day.

No. 2.—A good strong ferment can be made as follows:

Wash one pail of boiled potatoes and mix with four pounds of flour and eight ounces of sugar; thin up with two pails of water; cool to 85 degrees Fahrenheit; stock with two quarts of stock yeast or four ounces of compressed yeast. Set in a warm place. It will be ready in from eight to ten hours.

No. 3.—Take a well cleaned barrel, free from foreign substances, into which put four pounds of the best spring wheat flour and four pounds of potato flour. Mix the two flours and put on a little luke warm water, making a paste, thus avoiding lumps. Scald this with three gallons of hot water by pouring it slowly and steadily upon it, at the same time stirring it up thoroughly. Then pour on twelve or thirteen gallons of cool to luke warm water (in summer you can use cold water), giving the whole mixture a temperature of about 85 to 90 degrees. While pouring on this water stir the mixture well. Stock it away with one-half to three-quarters of a pound of compressed yeast or else with two gallons of stock yeast. Cover the barrel and allow it to stand undisturbed six or seven hours or longer if desirable. After the ferment has ripened, use it in the dough, adding twelve more gallons of water. This ferment can be used either for straight or sponge doughs. For sponge dough set the sponge with the ferment alone.

YEAST CAKE—DRY YEAST.

The dry yeast cakes which are in use are made out of a strong stock yeast, thickened with cornmeal and dried so they can not ferment. The strength of this yeast is very variable, when too old the loss of strength is considerable. The cakes are useful in places where no compressed yeast can be obtained, and are used by some bakers to start stock yeast and also for ferment. If used to set

sponge they work very slowly, and can be used only in a long sponge, but if given time become as strong as the other yeast.

The best way to work with dry yeast is to dissolve the dry cakes in warm water, and some yeast food, that is either sugar, glucose, molasses or some boiled cornstarch or malt, and with some flour make a soft batter and let it stand in a warm place till it begins to work; then it is almost double in strength and ready for stock, and also for ferment or sponge. When this dry yeast is fresh, from four to five cakes are equal to one ounce of compressed yeast.

Dry yeast cakes may be prepared in the following manner: Take a good strong stock yeast and work into it enough of white cornmeal to make a fine dry paste; roll out to about half an inch of thickness and cut in one inch squares; dust with cornmeal and put them to dry; turn over a couple of times till all the moisture is expelled and keep in a dry place. These cakes will keep for months in this manner.

Another Dry Hop yeast has rapidly come to the front recently. It is made by a new process, and is used by many leading bakers. This yeast is best to use in ferment like the old fashioned stock yeast, and it may also be used with advantage in a long sponge. Before using the yeast for ferment or sponge it should be dissolved in warm water and given at least fifteen to twenty minutes to melt and get ready. The ferment or sponge should be set in the evening to be ready in the morning, giving it from 12 to 14 hours to get ready. The ready ferment can be used for sponge or for straight doughs, adding the same amount of water, or less for quick sponge or doughs, and if the dry yeast is used in the sponge, the sponge when ready can be used in the same manner as other sponges, set with compressed yeast.

GENERAL SUGGESTIONS.

Many bakers object to the use of salt in the yeast because salt checks fermentation. For this reason, if salt is used it is put in as a preservative after the yeast is ready for use to prevent souring.

Sugar, glucose, molasses and malt extracts, potatoes and boiled cornstarch are yeast foods, and are used with yeast to make it grow and develop. For this reason it is added to yeast and ferment.

In using yeast for sponges and straight doughs many bakers prefer to dissolve the yeast required for the batch in warm water and with some flour work it into a soft batter, beat this up well

and let it rest for fifteen to twenty minutes in a warm place. This sponge is then dissolved with the other water and made into the sponge or dough.

Stock yeast is best started with a strong yeast, either previous stock or compressed distillers' yeast. In case of emergency ferment can be used to start stock yeast, and even some sponge can be used; but it is only used when there is no yeast to be had, because it loses its strength.

In making yeast and ferments practice the greatest cleanliness, to avoid contamination. Use a good strong yeast to start with, and keep up an even temperature during the ripening process. Do not disturb the yeast while this process is going on.

The Small Baker and Flours.

Bakers seldom use single or straight flours but prefer to use a mixed brand or blend of different flours to obtain the best results in baking. The blending of flours as it is done by the miller and also by many large bakers gives a better flour and makes a better bread. Blending is done on scientific principles. To be effective it requires knowledge of chemistry, and also a complicated and elaborate blending and sifting apparatus. Therefore. it is best for a small baker to use a standard brand of flour. The brand is the trademark of the miller, and great care is taken to keep the flour as much as possible on a uniform degree of excellence.

I do not propose to deal with special brands, but will refer only to the flours in general use for baking. The strong northern spring wheats are the best bread flours because they yield the most bread, but have not as good a flavor as the hard Kansas winter-wheat flours. For this reason they are blended into standard brands, often in combination with a soft winter-wheat flour. In special mixtures for vienna the soft winter wheat flour is left out, while for pan breads from one-half to two-thirds of winter wheat grades can be used with success. In a three-barrel mixture one part of Kansas patent flour, one of Minnesota and one of Missouri winter wheat make a good all round blend. For a five-barrel mixture one of spring wheat, two of Kansas, one of clear spring and one of soft Missouri; and for a seven-barrel mixture two of spring, three of Kansas, one of clear and one of soft winter wheat flour.

Oklahoma has produced very good bread flour, similar to the Kansas flour, which makes in combination with a strong spring flour one of the best flavored breads. The California and Oregon flours are also good bread flours, but do not possess the strength of the flours named before. They require less age in the dough; the dough has to be taken on the first proof, and moulded and panned at once. If treated like the stronger flours it would result in a heavy, flat loaf.

The Missouri winter wheat flour is the best of the soft flours; the Indiana and Ohio second; and the Michigan flour about third.

The soft winter wheat flours are preferable for cake-making, and are also excellent for tea-biscuit. The strong spring flours are not good for this purpose because they would take up more shortening and eggs, they would be more expensive and also make a dry harsh cake. The soft flour with the same ingredients makes a richer and moister cake and also a richer and shorter pie crust. For puff paste a mixture of half spring and half soft flour is generally used. Also special blends are put up by the flour merchants as cake flours.

There is a great variety of flours in use and even the best known brands change with every new crop. This makes it difficult to give a certain rule about fermentation and treatment in sponge and doughs. The proving qualities of the flour change, and it requires constant watching to get uniform results even with the same brands of flour.

NEW FLOURS.

Much difficulty is experienced with new flours. Every year, in the fall we hear of bakers having trouble with the flours. Most of the complaints come from the southwest, where straight Kansas and Territory flours are used. The breads fall in the oven, and in some cases make a smaller loaf and do not take up the usual quantity of water. Very few complaints come from the northwest, where the strong spring wheat patents are used, and still fewer complaints from eastern bakers who use more blended flours.

There will be always some difficulty with new flours, because a good flour should have an age of at least six months to make good bread. The old wheat flour always sells at a higher price at harvest time against the new flour; it is preferred by the baker and makes a better bread. The airing and drying of new flours is sometimes resorted to by bakers as a remedy. A couple of days' supply is emptied into a large bin or box near the oven and worked over frequently to prevent it getting lumpy. Other bakers have the storage room above the bake oven, where the flour is aired.

An old baker, used to Kansas flour, says: "Set a very slack sponge with three ounces of compressed yeast, take it at the first drop. Mix the dough medium; use twelve ounces of salt to the pail, sugar and shortening as usual. Take the dough young, and do not give too much proof in the pan,

so it does not fall in baking." Another baker says: "Make the dough tighter and use from two to three ounces more salt to the pail, and the bread will stand up better without changing the sponge." Still another remedy is a two-third sponge, that is two pail sponge and one pail for doughing, with ten ounces of salt to the pail; take the dough young. All these remedies have been used with success; but conditions vary to such a degree in different places, and different effects are produced on the doughs made out of a variety of flours, that it requires constant watching and a little experimenting to get good results.

TESTING FLOURS.

The usual test for flour is to take several samples and put them side by side on a board or stiff paper and smooth them with a knife or glass. In this manner the flour is tested for its freedom from bran and for color. The strong flour has a yellow, golden color and also a sharp, granular feel when rubbed between the fingers, while the weaker flours show more of a white light color and feel smooth and heavy in the hand. Another test of flours is to take even quantities of the different samples, say one ounce of each, and mix with even portions of water into a paste. The flour which makes the stiffest paste is the strongest and yields the most bread. There are other, more scientific tests, which require a technical education and a great deal of practice.

FLOUR STORAGE.

Age improves flours, makes it whiter. An even, moderate temperature of about 70 degrees Fah. is said to be the most favorable. Modern bakeries usually have the flour storage room immediately over the shop; the flour is taken up by elevators and is sifted in the storage room and let down through a spout into the weighing vessel and from there into the mixer.

All flours should be sifted before using. The breads are improved, made lighter; and foreign substances, such as strings, nails, jute, etc., thrown out. Flour absorbs readily the odors of strong-smelling substances, and should not be stored near kerosene oil, cheese, etc., or near stables. This would give a bad taste to the baked bread. When getting in flour all packages having been exposed to dampness should be examined, because wet flour, if left in the package, would become tainted.

GRAHAM AND WHOLE WHEAT FLOURS.

Graham flour is the unbolted meal of wheat; at least it should be, but in many flours the best part is taken out and other, cheaper grades, are substituted. Sometimes it is made of the poorer grades of soft wheat with more barn mixed in it. If using this flour for bread-making it is advisable to add a quantity of strong spring flour to make good bread.

Whole wheat flour is made out of the better grades of wheat, with half of the bran left out; this flour can be used without the addition of other flours.

RYE FLOUR AND RYEMEAL.

The best rye flour is milled from the center of the berry, and can be had from the miller if the price is paid for it. Generally the clear and best grades are mixed, only the bran left out. If a good grade of rye flour is mixed with a fifth part of good strong spring wheat flour it will make an excellent rye bread. Rye flour is often mixed with the cheaper wheat flours, and loses much of its original flavor by this procedure. This is partly done to improve the bread-making quality, to make a larger, lighter loaf.

Ryemeal is used for the German rye bread called pumpernickel, it is all of the rye berry with the bran in it, like the graham flour. When used for bread, sifted rye flour is added and also some wheat flour, to make a lighter bread.

Miscellaneous.

VARIOUS KINDS OF BREAD FROM ONE SPONGE.

Set a sponge as usual, medium firm, with five gallons of water from 6 to 8 ounces of yeast, at a temperature of 75 deg. Fahrenheit. This sponge will be ready and drop in about three hours; but the sponge may be set at a cooler temperature, say 65 deg. Fahrenheit, and with about 3 to 4 ounces of yeast to be ready in the morning. The sponge is ready when it begins to fall.

One gallon of sponge dough weighs from 18 to 20 pounds.

Take from the ready sponge say 20 pounds for rolls and buns, add 1 quart of warm milk, 20 ounces of sugar, from 1 to 2 pounds of lard and 2 ounces of salt. Make a medium firm dough; let it come up and work over; let it come again, and make up in buns and rolls.

For milk and Vienna bread take out 20 pounds of sponge, add half a gallon of milk, four ounces of salt and half a pound of lard, and proceed in the same way as with the roll dough.

To make coffee cake take 10 pounds of sponge, ½ pint of warm milk, 10 eggs, 1¼ pound of sugar, 1½ pound of butter and lard, flavor and mace. This would leave from the five gallon sponge just about 2½ gallons. Now we put on the remaining sponge 2½ gallons of water at a temperature of 75 deg. Fahrenheit. This would make 5 gallons; add 1 pound of salt or about 3 ounces for each gallon, and break up the sponge and water. We proceed now to take from this broken sponge for graham bread and rye bread, and leave the rest for the pan and French bread.

Measure out one gallon, adding one pint of molasses and four ounces of lard for graham bread and make dough with graham flour.

Take one gallon for rye bread, adding some caraway seed and dough with rye flour.

Take one gallon for French bread, making a slack dough with wheat flour. The remaining two gallons may be made into pan breads, adding from twelve ounces to one pound of sugar and lard for cream bread, or about half of that amount for ordinary pan breads.

The rolls, coffee cake and rye bread require a good heat and can be made ready first; the other doughs can be made to come slow, so it can be got ready for the oven in the succession it should be baked.

GERMAN PUFFS OR POP-OVERS. (WINDBEUTEL.)

One quart of skimmed milk, eight eggs, twenty ounces of winter wheat flour, one small teaspoonful of salt. Break the eggs, add the salt and beat together till the white and yolks are separated, add half of the milk, then beat in the sifted flour, add the rest of the milk and beat well into a creamy batter. Bake in deep, well greased muffin cups, fill about half and bake in a moderate heat or about 350 deg. Fahrenheit. It takes about thirty minutes to bake these muffins. These muffins are one of the baking curiosities; they require no baking powder and rise high above the moulds and look like the well known cream puffs. They are a great delicacy when eaten fresh from the oven with good butter, but lose much of their goodness when cold. At clubs and restaurants these muffins are well liked, the batter can stand for some hours after it is made and the muffins can be baked in small quantities during meal hours.

The mixture can be made with from four to six eggs to the quart of milk, but eight eggs is the original recipe. The batter must be very thin to make them right, and more milk may be required if a strong flour is used.

BEATEN BISCUITS.

These biscuits are well known in the southern states and are made by many bakers and also in hotels and families. The Maryland or Virginia biscuit is made of water and is like the well known water cracker in size. The other biscuit is made with milk and is of smaller size; both contain shortening. The Maryland biscuit is about two and one-quarter inches in diameter, and the other beaten biscuit is of a smaller size—about one and one-half

inches in diameter. I have used a good Missouri or Tennessee winter wheat flour for these biscuits. A biscuit just like the southern beaten biscuit, and which has become quite popular, was introduced in northern cities by an enterprising Chicago woman. She started to make the biscuits at her home on a small scale and sold them to families and hotels. The demand increased rapidly and after some time she had to move to larger quarters to supply the increasing demand. This was about ten years ago. At the present time her biscuits are sold everywhere as Bailey's Beaten Biscuits. These biscuits keep well, but are better if fresh made.

Both biscuits require a firm dough. The dough is beaten and folded over till it blisters. A large heavy club, or a heavy rolling-pin is used for this purpose. When larger quantities are made, a break, (or roller) is used.

MARYLAND BEATEN BISCUIT.

Take one pound of old dough left over from baking, thin this up with one pint of water, add one teaspoonful of salt and four ounces of butter or lard melted. Mix all together with more flour into a firm dough. Beat till it blisters, if it breaks before blistering, give some time to recover then beat again, the process requires from fifteen to twenty minutes.

Form in a long roll, break or cut in pieces, mould round on the table and let rest well covered with moist cloth to recover, flatten each biscuit and set on pans and let rest again, press each one down in the center, prick with the fork or with the docker and bake in a good oven.

SOUTHERN BEATEN BISCUIT.

Take two pounds of flour, two ounces of lard, a good pinch of salt and mix with milk into a medium firm dough. Beat this dough till it blisters; let it rest well covered. Roll out into a sheet one-third of an inch thick. Let it rest and recover. Cut with a small cutter, not more than two inches in diameter; put on pans; prick and bake in a medium heat to a very light fawn color.

The dough should be kept moist during the rest to prevent drying out, and they are best beaten on cloth with very little flour used for dusting; this gives the biscuit a nice clear color in baking.

Machinery in the Small Bakery.

Many small bakeries have found it profitable to use labor-saving machines. A flour-sifter is the first necessity, because a well sifted flour assures a better dough, a healthier fermentation, and keeps out foreign substances such as strings, jute, nails, etc. A dough mixer is used by many bakers who use less than a barrel of flour per day, and even the moulding machine has proved a paying investment in these bakeries. By the use of such machines the work is made easy for the employee, while at the same time it gives independence to the employer. The doughs are made better by machine than they are made by hand, doing the work more quickly; the moulding machine makes a better and more uniform loaf of a finer grain and texture.

Naturally when changing from hand-work to machine-work it is necessary to fit the process to the new conditions by installing a system to make the doughs a certain temperature and consistency, by weighing the flour and water and using the proper temperature. A little close observation and experience will teach the baker in a few days how to work and use such machines. In places where electricity can be had the electric motor is considered the most economical to use, with an individual motor for each machine. The next best motive power is the gas or gasoline or oil engines which are used in many bakeries.

The Use of Malt Extract.

Bakers use malt extract, malt flour and yeast foods to improve the flavor and add moisture to the bread; these preparations also stimulate and quicken fermentation, saving sugar and lard. Many prominent bakers have used and are still using malt extract since it was introduced about twenty years ago with success.

Malt extract affects both yeast and flour; it acts differently with various flours, because some flours ferment more rapidly than others. Malt extracts differ in diastatic strength which is given from 40 to 160 degrees on the Lintner scale. A 60-degree extract is used by some bakers, while others prefer the 120-degree grade. Half a pint or half a pound of the 60-degree extract is used for the 12-quart pail, or from 1½ pounds to 2 pounds for 100 pounds of strong bread flour; 2½ pounds per barrel is about right to use, and when using the stronger (120-degree) grade the amount should be reduced by half. When a weaker flour is used, bakers prefer an extract of a lower diastatic strength or a smaller quantity of the stronger extracts, as an excessive use of extract (especially with weak flours) causes too much moisture in the crumb—makes it sticky and clammy. As said above, the results vary with different flours; so it will be seen that the same quantity of extracts cannot be used for all kinds of flour; it must be used with discretion to obtain the best results.

MALT BREAD.

The following formulas are for short straight doughs for breads similar to "Butter Krust," "Butter-Nut," "Buster Brown," etc.:

The flour used in one bakery for this bread consists of from two-thirds to three-fourths of spring patent and one-third to one-fourth of soft winter wheat patent flour. Dough-room temperature: 78 to 82 degrees.

Flour 196 pounds; yeast food flour 3 pounds; water 122 pounds; dry milk 2 pounds; compressed yeast 2 to 2½ pounds; salt 2¾ pounds; sugar 3 pounds; malt extract 1½ pounds; lard or oil 3½ pounds.

Dissolve the yeast in one gallon of water of 85 degrees Fahrenheit, with the yeast food and extract, and set aside for 10 minutes. Put the salt, sugar and dry milk in the mixer with the rest of the water, let the mixer run for a few minutes to dissolve the milk, salt and sugar and let in the flour. When the flour is partly mixed add the yeast mixture, and (when well incorporated) the melted lard or oil. The time of mixing in high-speed mixer may require from 16 to 20 minutes; in a slow speed machine from 23 to 35 minutes.

The dough, when taken from the mixer, should be about 78 degrees. Let the dough lie for 2½ hours, then fold over the sides, (do not punch down); let the dough come up again for 1½ hours; give a good punching, let it stand one hour more and punch well again; let it rest for one-half hour more; take to the divider in six hours; then from divider to rounder and proofer; in the proofer the loaves are given 15 to 16 minutes, then are conveyed to the moulder, put in pans, placed in racks which are wheeled into the proofing chamber, where the loaves are proved with some steam. When proved they are cut or left plain, as the case may be, and baked with steam in the oven. If the scaling and moulding is to be done by hand, the dough should be taken in about 5½ hours. When all strong flour is used the dough should be given more age. Fast speed mixers increase the temperature during mixing; therefore the temperature of the water should be reduced accordingly.

MALT BREAD, NO. 2.

Flour 100 pounds; water about 7½ gallons; malt extract 1½ pounds; yeast 12 ounces to 1 pound; dry milk 1½ pounds; salt 1½ pounds; lard or oil 1½ pounds.

Dissolve the malt extract in one gallon of water from 85 to 90 degrees Fahrenheit and add from 8 to 10 pounds of flour to make a soft dough; let it stand from 30 to 45 minutes; dissolve the yeast in a little water and add to the batter about 5 minutes before making the dough. Add the other ingredients as usual, and proceed with the dough as given in the previous recipe. This method makes a sweet loaf with a good malt flavor. I have used the recipe without the milk and have added 2 pounds of oil and one pound of sugar which makes a fine cream loaf with a good flavor.

MALT BREAD NO. 3.

12 quarts water; 5 to 6 ounces yeast; 8 ounces malt extract; 10 ounces salt; 6 to 8 ounces of lard or oil, about 42 pounds of patent flour (more or less according to strength); from 4 to 6 ounces of sugar may be added, but can be left out; 8 ounces of dry milk.

Dissolve the extract in one quart of warm water; then put in the dissolved yeast; put the salt, sugar and milk in the remaining water—tempered to give the dough the right degree, and mix in the flour; when the flour is partly mixed in add the yeast and extract, and last the melter lard or oil. Let the dough come up to the turn or until it will not rise any higher; then work over; give it one more hour; work over again; give it three-quarters of an hour; work over again; then put on the bench, scale and mould in the pans. A dough set at about 80 degrees with corresponding shop temperature should be ready for the bench in from 5½ to 6 hours—depending on the strength of the flour used.

MALT EXTRACT AS A YEAST-SAVER.

Some bakers use the following formula on account of the saving of yeast:

6 pounds of lard; 2½ pounds yeast; 4 pounds yeast food flour or cornflakes; 3 pounds malt extract or malt flour; 9 pounds of sugar; 500 pounds of flour; 294 pounds of water.

The yeast, malt, and yeast food flour or cornflakes are mixed with one gallon of water at 85 to 90 degrees Fahrenheit, one hour before being used in the mixing. This makes a strong ferment which starts up an active fermentation in the dough. This formula has been paid for by many bakers, and has been kept secret for a long time.

Appendix.

Prepared for Fourth Edition

SPONGE AND DOUGH CHART.

Almost every baker has a regular formula for each kind of bread, roll or sweet doughs he makes, and a table would be required for each kind of dough. In figuring out the mixing of sponge or doughs, it is the post practical way to figure every ingredient going into it by weight, but very often bakers figure by pail or gallon. As it is often necessary to make a smaller or larger batch of bread from the same formula it may be helpful to have a table giving the proportions in pounds and in gallons for liquids used. One baker uses the following formula for a barrel of flour, for a straight dough:

One barrel flour (196) pounds); 112 pounds water (14 gallons); 1¾ pounds yeast; 3 pounds salt; 5¼ pounds sugar; 4½ pounds lard. For a straight dough, set at from 78 to 82 degrees after mixing, according to temperature of shop. Dough will have the first rise in from 3 to 3½ hours, second rise 45 minutes to 1¼ hour, third rise 35 to 45 minutes; the total time from 4½ to 5½ hours.

A straight dough chart on a gallon basis (8 pounds per gallon) would read as follows:

STRAIGHT DOUGH TABLE.

FLOUR. Lbs.	WATER. Lbs.	or Gals.	YEAST. Lbs.	Ozs.	SALT. Lbs.	Ozs.	SUGAR. Lbs.	Ozs.	LARD. Lbs.	Ozs.	TOTAL. Lbs. Ozs.
196	112	14	1	12	3		5	4	4	8	332.7
140	80	10	1	4	2	8	3	12	3	2	230.5
70	40	5		10	1	1½	1	14	1	9	115.2½
56	32	4		8		14	1	8	1	4	92.8
42	24	3		6		10½	1	2		15	69.1½
28	16	2		4		7		12		10	46.1
14	8	1		2		3½		6		5	23.0½

Set dough at 80 to 82 degrees. Shop, 78 to 80 degrees.

In setting sponge we may regulate the time to ripen the sponge by using more or less yeast, increasing or lowering the temperature of the water, or by using more or less flour, making the sponge stiffer or softer.

In the average sponge from 1¼ to 1½ pounds of flour are used to give the proper consistency, but when setting a long sponge, standing more than 4½ to 5 hours, it is advisable to add a small

amount of salt to keep the sponge in good condition. Long sponges also should be made stiffer, using more flour, as they slacken considerably. The addition of salt prevents the forming of too much acidity. Short, lively sponges may be set with the same amount as given for the straight dough, but as a rule only about half the amount of yeast is used in sponge as in a straight dough. Naturally the addition of yeast regulates the strength and activeness of the sponge and dough, as more or less yeast will shorten or lengthen the time of ripeness of the dough. It is not advisable to force or drive a sponge with a high temperature and little yeast; it is a better way, for the purpose of saving yeast, to set the sponge at a normal temperature but give it plenty of time to ripen. One must never forget that a sponge is regulated (will have more or less power) according to the amount of yeast added. Where several kinds of flour are used in the sponge method, it is advisable to use the strongest flour for the sponge, the softer flour for doughing. In mixing the sponge it should not be mixed as much as a straight dough; it should not be toughened, simply mixed so that water, flour and yeast are well incorporated. In timing sponges each flour works differently and, according to the strength of the flour, it will take more or less time for the sponge to ripen, even with the same amount of yeast, flour and temperature; there are also some flours which take less age in sponge than others.

A sponge is ready when it drops and goes down about one inch, for some kinds of bread sponges are allowed to come up again and are taken when going down the second time. When a sponge is ready, the water with salt and sugar dissolved in it is added to the sponge, and when broken down the flour and shortening added and mixed smooth. A sponge dough is not mixed as much as a straight dough, and the water for doughing is usually taken several degrees cooler than the water for setting sponge.

TABLE FOR SPONGE AND DOUGH.

FOR SPONGE			FOR DOUGH	
FLOUR. Lbs.	WATER. Lbs. or Gals.	YEAST. Ozs.	FLOUR. Lbs.	WATER. Lbs. or Gals.
105	70 8¾	14	91	42 5¼
75	50 6¼	10	65	30 3¾
38	25 3⅛	5	33⅓	15 1⅞
30	40 2½	4	26	12 1½
23	15 1⅞	3	19½	9 1⅛
15	10 1¼	2	13	6 ¾
7	5 ⅝	1	6½	3 ⅜

Set sponge at 82 degrees, set dough 80 degrees; shop temperature 78 to 80 degrees.

This table is used with a slightly larger amount of liquid in the sponge—1½ pounds flour to 1 pound water—and half the amount of yeast used in the straight dough table. Sponge will be ready in from 3 to 3½ hours, according to size; a larger sponge sooner, a smaller sponge later, with same temperature and amount of yeast. Let dough rise till it loses resistance; punch; then let it come up half, and take to bench.

The time for sponge and dough process would be practically the same as used for the straight dough, in theory, but it does not always work out that way, and a baker must use his judgment in using more or less yeast, etc., in this instance. If the sponge reaches the drop in from 3 to 3½ hours, the dough would have its first rise in from 1 hour to 1¼ hour, and could be taken to the bench in about 35 to 45 minutes more, giving a total time for sponge and dough from 4½ to 5½ hours. It is always advisable in short time sponges to use rather more yeast than a high temperature, and a sponge should not be taken too young; it should flatten and break, otherwise the dough will work young and lack volume in baking.

In regard to timing sponges, so as to have them ready at a certain hour, this must be regulated largely by the amount of yeast used in the sponge; the temperature and amount of flour also enter into the time schedule.

BREAD WITHOUT LARD OR SUGAR.

Sugar is used in breads to aid fermentation, to give moisture and flavor to the crumb and color and bloom to the crust. Fats are added to produce a short, tender crust and give the bread the moisture-retaining and short-eating qualities. Leaving these ingredients out will cause a lack of these qualities so much desirable in good bread.

To produce a fairly sweet and moist loaf we must add some moisture-retainers, which at the same time act as a yeast food to support the fermentation, we leave out sugar or lard.

In the days gone by most all the plain breads were made without lard or sugar; only yeast, salt, water and flour were used, but all bakers made their own yeast, hops and malt yeast, barm, or potato ferment; the sponge and dough method prevailed. Hearth-baked breads were in favor, pan-baked breads were little known. The home-made yeasts and ferments made a good moist and well-flavored bread, but as yeast making was not done scientifically it was often "hit-or-miss"; the bread was good some days but bad

on other occasions. These yeasts gave flavor and moisture; the malt yeasts added sugar; the scalded flour or potato the moisture and aided the yeast. The entrance of the compressed yeast proved to be almost a knockout for the home-made yeast. If some of the good qualities of the old yeasts were lacking in the compressed yeast, it was very reliable and uniform, made it possible to have a dough ready by the clock and to handle doughs on a large scale, with modern machinery. It made the modern bread factory possible. At the same time pan-baked breads became more popular; bakers preferred to make these breads. Pan-baked breads lack the flavor of the hearth-baked breads, and the addition of sugar and lard was resorted to to give flavor and moisture.

Bakery-made yeast is used in some bakeries, but even these bakeries add sugar and fat if they wish to produce a rich loaf as made in the large bakeries which are using compressed yeast. If sugar and lard are left out, some scalded flour or meal may be added as suggested in the article referred to, or a potato ferment may be used, or boiled potatoes added for doughing. Most all practical bakers admit that a sponge and dough method produces a better keeping quality in a loaf—also adds volume; and such a bread requires less sugar and lard. A good many people like the flavor of the slight acid taste of sponge bread.

It is best to use a strong flour in the sponge and a winter wheat flour for doughing. A mild winter wheat flour is better for a bread in which no sugar or lard is used because it is sweeter, contains more natural sugar, gives more moisture to the crumb and color to the crust.

A straight dough bread could be made with half of a good potato ferment and half water for a good pan loaf, or from three to four pounds of peeled, boiled and mashed potatoes may be added to each 25 pounds of water used for doughing, using yeast and salt as usual. A straight or sponge dough process may be used for the well-known New England bread in which scalded white corn meal or corn flour is used in proportions of 5 to 6 pounds of white corn meal for each barrel of flour.

Here are some recipes without sugar or lard:

PLAIN PAN BREAD.

196 pounds flour; 1½ pounds yeast; 3 pounds salt; 115 pounds water.

For sponge method use 65 to 70 pounds of water in medium sponge,

the rest for doughing, with strong flour in sponge, softer flour for doughing. Treat like other sponge breads.

FERMENT BREAD—STRAIGHT DOUGH.

100 pounds flour; 1¾ pounds salt; 30 pounds water; 38 pounds potato ferment.

The ferment may be made from 8 pounds potatoes boiled and mashed with 3 pounds of flour, this cooled down to 85 or 90 degrees, made up with potato water and cold water to make about 4½ gallons, adding 6 to 8 ounces compressed yeast. This ferment will rise like a sponge, and when it begins to drop it may be taken for doughing. Treat same as other straight doughs, keeping dough on the young side.

BREAD WITH POTATOES OR CORNMEAL.

100 pounds flour; 7 to 7½ gallors of water; 1½ pounds salt; 1 to 1½ pounds yeast; 7 to 8 pounds boiled and mashed potatoes, or 2½ to 3 pounds of scalded corn flour or corn meal (white corn flour preferred).

When using potatoes, mash potatoes while warm, use the water the potatoes are boiled in and more cold water to make up 7½ gallons, and strain through sieve. Dissolve yeast in a part of the water, add salt, and make dough as usual. When using corn flour, scald flour with boiling water, thin down and pass through sieve, and make dough with salt and yeast as usual. These breads do not stand much proof in the pans. When using sponge method add potatoes or scalded flour for doughing. Treat dough young and cool, and rather give more time. This will give a good flavored loaf. Don't over-proof in the pan; this will give spring to loaf in baking. The given recipes will also make good bread, adding sugar or lard, or both.

ENGLISH BRAN AND BROWN BREADS.

1. BRAN BREAD.

Make a straight dough with 8 pounds of fine wheat flour, 2 pounds of clean bran, 4 ounces lard, 3 ounces sugar, 3 ounces yeast, 2 quarts and 1 pint of water (6¼ pounds), 2 ounces salt. This dough will be moderately soft. Allow to lie one hour, then knead thoroughly and knead again in half an hour. The dough should then be ready for scaling in 2-pound pieces. Best baked in

covered tins. Allow to prove till about 1 inch to the top, say 35 minutes, and bake with covers on.

2. PLAIN BROWN BREAD WITH COARSE MEAL.

Weigh 6 pounds coarse meal and 2 pounds fine wheat flour and mix well together. Make up into a straight dough with 2 quarts and ½ pint water at 102 degrees (English quart =2½ pounds), using 2 ounces yeast, 2 ounces salt, 1 ounce sugar and 2 ounces lard. Rub the lard into the flour, dissvole the salt and sugar in water with the yeast. When the dough is made up it should be clear and smooth and should be toughened by thorough mixing. Keep covered in a temperature from 80 to 90 degrees; at this temperature dough will be ready for scaling and moulding in about 1 hour, but before scaling it should be well kneaded. When moulding, whether to be covered or baked in open tins, *it gives the loaves a nice coarse appearance (which satisfies the ideas of those who prefer this kind of bread) if it is rolled in coarse, broken wheat meal.* The loaves should prove from 40 to 50 minutes, when they should be ready for the oven. Small sizes weighing one pound will bake in 35 minutes, the larger size weighing 1¾ or 2 pounds will bake in 55 to 60 minutes.

3. FINE MEAL BROWN BREAD.

From the fine meal the coarse bran is in greater part removed, and with such a meal it is not necessary to use any fine wheat flour. If there is any difficulty in getting volume, use 7 pounds fine meal, 1 pound fine wheat flour. The same method may be used as for the plain brown bread with coarse meal, but 3 ounces of malt flour may be used with advantage; it assists in giving the loaf flavor and color; 3 ounces syrup may be used in place of the sugar.

4. FINE MEAL BREAD WITH SODA AND CREAM OF TARTAR.

For 5 pounds of meal use 1 ounce soda, 2 ounces of cream of tartar, 3 ounces sugar, 1½ ounces salt, 5 ounces lard. Mix with half milk, half water (nearly 3 pints) *into a rather soft dough.* As it needs handling only once, mould up in dry meal and place in the tins.

5. OATEN WHEAT MEAL BREAD.

Use a mixture of half fine oatmeal and whole wheat meal, 1 ounce soda, ½ ounce cream of tartar for every 5 pounds of meal, 4 ounces lard, 4 ounces syrup, making a soft dough. Bake in a medium heat of 400 degrees. For malted brown breads use 2

ounces of malt flour for each pound of meal used. Treat like plain brown bread.

AMERICAN FORMULAS FOR BRAN BREAD.

No. 1.—20 pounds bread flour, 20 pounds whole wheat flour, 5 pounds clean bran, 1 pound of brown sugar, 10 ounces salt, 1 pound of yeast, 1 pound of lard, 30 pounds water. Make warm straight dough, let come up once near the point where dough weakens, work over, let come half and work down again; then scale and mould in the pans. Give medium proof and bake in about 400 degrees or moderate oven. *Use the suggestion given in the plain brown bread recipe, rolling loaves in meal or bran.*

Malt flour or malt extracts, dry or fresh milk may be used in this recipe to improve flavor. Scale about 1¼ to 1½ pounds for the 10 or 15-cent loaf.

2. HONEY BRAN BREAD.

25 pounds bread flour, 10 pounds soft winter wheat bran, 10 quarts of water or part milk, 6 ounces yeast, 1½ to 3 pints honey, 8 ounces salt, 1 pound shortening. Mix dough to have it about 80 to 82 degrees; let come up once, fold over, let come the second time and bake. Give fair proof, bake in bread heat. When baked and while hot wash with a solution of honey and water.

3. PLAIN BRAN BREAD.

60 pounds spring wheat flour, 15 pounds soft winter wheat bran, 6 pounds white rye flour, 6 gallons water, 1 pound compressed yeast, 2½ pounds sugar, 2 pounds lard, 1¼ pound salt. This recipe may be improved by the use of malt and milk; 20 pounds of whole wheat and 40 pounds of spring wheat may be used in place of 60 pounds wheat flour. Give slightly more age in dough, giving it two short punches in half-hour intermissions after the first folding.

BREADS FROM MIXED FLOURS.

It is very likely that in the near future bakers will have to mix other grains with the wheat flour, use whole wheat flour and add corn flour in large quantities. Corn flour will be practically the only flour we may expect with wheat flour because it is cheaper and better adapted for mixing with wheat flour for bread-making than barley or oaten flour, which are not suited for bread-making. For mixing corn flour with wheat flour, flour made from white corn is no doubt the best, and will make the best flour. The

people of the southern states, where corn breads are very popular, prefer the white corn meal for their breads, if it can be had; it has been my own experience that the yellow meal acquires a bitter taste in a very short time, and if used scalded in breads, in the form of mush, it gives a strong yellowish color to the crumb.

The term corn flour is often differently understood. British bakers call cornstarch flour corn flour; over here we understand the term as a fine flour made from the corn or maize berry, with the bran removed. In some instances the gelatinized and processed corn flakes are made into a flour which is used as a yeast food and moisture-retainer in breads; this is falsely termed as corn flour.

Practical bakers will not have much difficulty in producing a good loaf from mixed flours if using a little common sense—that is, treating the mixed flours during fermentation properly, the same as they would treat a weak flour. Here are a few rules which hold good:

(1) *Treat doughs cool.*
(2) *Don't save yeasts.*
(3) *Take doughs young.*
(4) *Don't over-proof in the pans*
(5) *Don't use a too hot oven.*
(6) *Don't under-bake.*

The breads must be given short proof in the pans. Breads that contain large amounts of scalded meal or are treated with malt preparations are liable to contain a large amount of moisture, and therefore must be thoroughly baked.

Corn flour may also be used in rye breads with success; but as rye flour is a weak flour, containing very little gluten, it may not be used in large quantities except in the bread known as pumpernickel, which is made with a very stiff dough. Rye blends contain about ⅔ of clear wheat flour and ⅓ of rye flour and are usually mixed in the mill; but many bakers prefer to mix their own flours, for the reason that a fresh-milled rye flour has a better flavor than a rye flour stored several weeks, as rye flours lose strength and flavor with age.

One fact stands out, while corn flour or corn meal is best used in a scalded condition only a small percentage can be used—not exceeding 4 per cent; while when using the corn flour without scalding as much as 15 per cent may be used, and with a strong spring wheat flour as much as 20 per cent, with a slight loss in volume.

I give herewith a few formulas for mixed breads:

WHOLE WHEAT BREAD WITH CORN FLOUR.

50 pounds bread flour; 35 pounds whole wheat flour; 15 pounds corn flour; 60 pounds water; 1 to 1½ pounds yeast; 1½ pounds salt; 1½ pounds brown sugar (or 1 pound of malt extract in place of sugar).

Mix the flours; dissolve the yeast in part of the water; the sugar and salt in the rest of the water; mix and add flours; have dough from mixer at 78 to 80 degrees Fahr. Let rise up full once; fold over, let come half and bake.

This method may be varied by scalding a part of the corn flour, cool down to 150 degrees, mix with malt extract and let stand for from 1 to two hours, and add this mixture for doughing. Or the liquid may be used half in a soft sponge, using wheat flour for sponge, the rest of liquid and flours for doughing. Shortening may be added, from 1 to 2 pounds, to given formula.

ENTIRE WHEAT BREAD.

40 pounds whole wheat flour; 60 pounds bread flour; 56 pounds water; 2 pounds molasses; 2 pounds lard; 1 pound malt extract; 1¾ pounds salt; from 1 to 1½ pounds yeast.

Mix and treat dough the same as the preceding formula, giving it a little more age, or about three risings, letting it come up first until it loses spring; pull over, let it come nearly full, punch, let it come half, and bake. Bake in medium heat with steam in oven.

RAISIN BREAD WITH MIXED FLOURS.

75 pounds bread flour; 15 pounds graham flour; 10 pounds oatmeal; 6 pounds raisins; 6 quarts molasses; 1 pound yeast; 2 pounds salt.

Mixture will produce about 130 loaves, scaled 1 pound and 12 ounces each. Scald the rolled oats with 10 quarts of boiling water; add 24 quarts more water; add molasses, salt, graham flour, raisins and yeast. Have dough at 80 degrees; let rest 6 hours; work over and make up in loaves; proof and bake. (One-fourth of this amount may be used for a trial batch.)

PUMPERNICKEL—MILITARY BREAD.

Set a sponge with one gallon of water, 2 ounces compressed yeast and from 10 to 12 pounds of blended rye flour; when sponge is ready, add 1 gallon of water and 6 ounces of salt, and make a firm dough with rye meal. Let dough stand until it shows life, then scale in 2¼-pound pieces. Mould in shapes of about 8 inches; let prove a little, then brush sides and ends with oil or lard; press

in long, square shapes. Take a large pan, 26x18 inches, 2½ inches high, line with half-inch wood frame. Set the loaves close together, 6 loaves on each side—the pan will hold 12 loaves 8x4 inches, weighing 2¼ pounds each. Let the loaves proof up a little; wash with water and bake in a good heat for nearly 2 hours. Some sour dough may be used, or a piece of old rye bread dough in the sponge to give slightly sour tang to this bread. As I have suggested in the opening paragraph, corn meal or corn flour, or barley or oaten meal may be used with advantage in these mixed breads.

I may say that corn flour may be used with advantage in bran breads; and a small quantity of scalded corn flour would be an improvement to these breads.

A GOOD LOAF.

E. D., Tennessee, asks judgment on a loaf made as follows: 12 gallons water; 3 pounds corn flour; 3 pounds Argo corn sugar; 3 pounds shortening; 2 pounds 10 ounces salt; 1 pound diamalt; 1¾ pounds milk powder; 1 pound 14 ounces yeast. Straight dough; 20-minute ferment, made with 3½ quarts of water, the malt, corn flour and yeast; half Gold Medal and half Kansas hard wheat flour. Dough out of mixer at 80 degrees; machine mixed 20 minutes. First punch, 3 hours; second, 1 hour; let lay 30 minutes, then moulded by hand into pans; machine pans, 14 loaves to a pan. Scaled 12 ounces. Steam in proof box; baked in brick oven for 30 minutes without steam.

Formula has proved a good trade builder.

BREAD FOR OUR SAILOR BOYS.

[Officials of the U. S. Navy wrote for suggestions concerning the making of bread, the character and storage of bread flour, etc., putting the inquiry in the form of a series of six questions. Mr. Paul Richards answered these questions; and, believing that what he said in answer to the inquiries would prove not only interesting, but practically helpful to many bakers, the questions and answers are reproduced here.]

1. What is the best bread formula for 100 pounds of flour? Why?

Answer: There is no "best bread formula." Almost every locality demands a different kind of bread. The character of the bread desired naturally influences the ingredients used. Good bread is made from flour, water, salt and yeast as ingredients; these breads are popular in many European countries. American breads contain sugar and fats, and are often improved by a further addition

of milk and malt extract. I may say here that *the best kind of bread is that which has the highest food value*—food values as represented by calories or heat units, which serve as fuel to yield energy to the human body in the form of heat and muscular power.

Wheat—fuel value per pound.....1.750 calories
Sugar—fuel value per pound.....1.860 calories
Lard —fuel value per pound.....4,080 calories

Adding nutritive substances to bread increases its nutritive value; that is, if the food value of the added substances is of a higher grade.

The quantities of ingredients vary for 100 pounds of bread flour: from 57 to 61 pounds of water; 1 pound 6 ounces to 1 pound 8 ounces salt; 12 ounces to 1½ pounds yeast; 1½ pounds to 3½ pounds sugar; 1½ pounds to 3½ pounds lard or other shortening. A good formula to go by is to use for 100 pounds of flour 60 pounds water; ¾ pound yeast; 1½ pounds salt; 3½ pounds sugar; 3½ pounds shortening. Sugar and lard may be reduced to half the amounts given by adding from ¾ to 1 pound of malt extract and 1 to 1¼ pounds dry milk. Malt extract is added to breads to act as a yeast food and act on the flour by softening the gluten and while baking acts on the starch, changing the starch into a form of sugar. Milk is used for its food value, also adds flavor and moisture.

Changes in the amount of sugar are required for certain reasons; strong, hard flours contain less natural sugar than is found in softer flours; softer flours require less fermentation. If strong flours are used, more sugar must be added to doughs.

Fermentation periods of flours vary, and the best way of timing a straight dough is to watch the fermentation closely. Judging doughs on a time basis is the most favored method. While this is not absolutely correct (as there are variations caused by changes in temperature), one may judge with fair correctness that the first rise of the dough represents three-fifths of the total time of fermentation, or 60 per cent.

As a rule doughs are allowed to rise well the first time in the trough to the point where they lose elasticity—show signs of weakening; then the doughs should be folded in well from ends and sides, or punched and folded in to expel the accumulated gases, forming a solid mass again. This point requires close watching, as dough should not be allowed to fall of its own accord, which it would do if the gases became stronger than the gluten.

Temperature is a very important factor; the most favorable temperature varies between 78 to 84 degrees with different flours, 80 to 82 degrees being considered best after mixing the dough. The time of the first rise varies with flours of different strength. A flour which contains a coarser gluten will take more time to reach the first rise with the same temperatures and amount of yeast used than a flour with a finer gluten. For instance, if the first rise occurs in 3 hours, the second folding or punching should be given in about 1 hour, *without giving the dough time to lose its elasticity.* The dough will reach about the same height in the trough in about that time but will still feel strong and elastic; the next folding may then be applied in half an hour, and in the next half hour the dough would be ready for the bench. The dough would be ready in 5 hours.

When getting in a new flour it is therefore best to watch the first rise closely; if it comes up in less time than the flour formerly used, which reached this point in 3 hours, it will require less time for total fermentation. If it takes more time, it will also take a longer time in the total fermentation.

The condition of water also influences fermentation; a hard water retards fermentation, while a soft water accelerates it; therefore when hard water is used it is advisable to use more yeast.

2. What age should flour be before using? Why?

Answer: More or less age is required, depending on the moisture content of the grain, which varies with the conditions under which the wheats are grown, if they are milled from new wheat just harvested or from older wheat. It also depends on the methods of milling, which vary in different mills. Flours milled from dry wheat do not require as much age or dry out before using; they may be used shortly after milling. In flours milled from dry wheat the granulation is sharper than when made from wheat tempered by washing or soaked with water to enable the miller to get a higher color or increased weight. The dry milled flour does not look as well, but it does not require much time to dry out and takes up more water in doughing.

Tests have shown that high-grade flours improve in storage, being kept from 4 to 5 months, lower grade flours up to 6 months; if kept longer they will deteriorate in quality, as the rise of acidity in aged flours causes a breaking down of the gluten.

3. What size should the loaf be? Why?

Answer: Size or volume expresses the size of a loaf for a certain weight of dough, and in my opinion the size of the loaf also determines the flavor. It has been my experience that two loaves from the same dough vary in flavor and moisture content and keeping qualities; loaves scaled two pounds kept their flavor, in fact had a better flavor than the loaves scaled one pound, also retained moisture longer and consequently had better keeping qualities.

4 and 5. How should flour be stored on board a vessel or in a storehouse? Why? (Note—Flour is generally replenished about every three months from a storehouse ashore. Please take into consideration temperature, ventilation, humidity, etc.)

Flours should be stored in clean, airy and well-ventilated rooms. A cool, damp storehouse, or a warm, damp storehouse, furnishes desirable conditions for the deterioration of flour. Flour should not be stored where it may absorb foreign odors, and should not stand in places where it can absorb moisture. Condition of high or low temperature, coupled with high humidity of the atmosphere, seem b oth destructive to the gluten of the flour. Tests proved that the largest yield from high-grades flours was obtained after a suitable storage of 4½ months; the lower grade flour was found to give its largest yield after 6 months' storage. After the given time the yield gradually diminished. This seems to prove that the best period of storage is for high-grade flours from four to five months, for lower grades about six months.

Stored flour if in bags should be changed once ar twice a month to air it perfectly. It should not be stacked too high or too closely together to let the air circulate. The containers should be clean and the storeroom dry and medium cool. (This would answer questions 4 and 5.)

6. What should be the specifications for flour? Why?

Many bakers blend their flours to obtain a bread of good flavor, volume and texture, and as there is no standard for flours bakers buy flour according to its baking value. Patent flours and straight flours are mostly preferred for yield and flavor; the only difference between bread from a patent flour and from a straight flour is the color—the straight grade being slightly darker. Some straight grades of flour at times are capable of giving more volume than patent flour. Bakers know that the best grades of flour are always the best, because they produce a good flavored loaf, yield

more, produce a better selling bread. That is the reason why bakers pay more for the best grades of flour. In selecting a flour, generally speaking, a flour which is of a high gluten content, good color and low percentage of moisture is the best to produce a bread of quality.

The best test for a flour is to bake it; for this reason most of the larger bakeries have an experimental room where doughs may be mixed and kept under constant observation through the fermenting stage. Loaves are baked under normal conditions from doughs given more or less age, varying temperature and ingredients, and are tested to see which fermenting periods are best suited to make the best loaf. Some bakers judge flours after gluten content; but this test cannot be used as a method of testing quality, as it is not the quantity but the quality which counts.

Specialties In Yeast-Raised Sweet Goods

DANISH PASTRY.

This class of pastry is a variety of pastry also known as yeast-raised pastry. French or Vienna pastry or as yeast-raised puff paste. It is made similar to the regular puff paste with the difference that a yeast-raised sweet dough is used, into which additional butter is rolled. The sweet doughs are made of different richness, from a plain sweet bun dough to a rich sweet coffee cake dough; and for each pound of dough from two to four ounces of butter or a mixture of butter and butterine is rolled in. The ready dough is rolled out three times as long as it is wide, and for about four pounds of the prepared dough from eight to fourteen ounces of cool, pliable butter is placed in small pieces over two-thirds of the rolled out dough, and the dough folded in three leaves or folds The dough is then rolled out three times and folded in three, then laid together again, and after a little rest it is ready to be worked up in a variety of shapes and sizes.

In Danish pastry a fourth rolling is often given and cinnamon sugar or a mixture of ground nuts and sugar or prepared fillings made from almond paste, etc., rolled in the last folding. The doughs may be made by the sponge and dough or by the straight dough method, and doughs may be made to come fast or slow, using more or less yeast.

Use a first-class patent bread flour, and if flour is very strong add one-fourth part of cake flour. Don't spare yeast; plenty of yeast in sponge or in straight dough insures a good, lively dough, as it is necessary to handle the dough cool to prevent the butter running. A mixture of butter and pastry butterine works best; some bakers use half and half. Take a tub of creamery butter and one tub of butterine, put this in the dough mixer and mix it thoroughly; this makes a firm and pliable mixture, which is well adapted for rolled-in pastry.

SPONGE AND DOUGH PROCESS.

Set sponge with 2 quarts of water, 4 to 6 ounces yeast, about 5 pounds flour; when the sponge breaks add 2 quarts milk, 1½ pounds sugar, 1½ pounds lard, 1 ounce salt, 10 eggs, flavor with mace and lemon, and make a medium soft dough, using about 14 pounds flour altogether. Have dough cool, or about eighty degrees. Let dough rise once, work down and let come half. For straight dough use same ingredients. A dough at 80 to 83 degrees, with 6 ounces of yeast, will be up in about 2½ hours first time. Work down; let come about ¾ hour; fold down; let come up half, and the dough will be ready for rolling in the butter. A still shorter dough may be made by using one pound of yeast for each gallon of liquid used. Such a dough, at about 78 to 80 degrees, may be used for rolled-in dough very quickly, letting it lay about 20 minutes, and begin rolling in the shortening at once. It must be worked up quickly in a cool shop temperature of about 80 degrees; in a very warm shop the shortening will soften too much, making a greasy-looking dough. The made-up goods must be proved in the ordinary shop temperature, and not forced with a high temperature, to insure a good-looking and fluffy pastry. Richer doughs may be made by using from 10 to 12 ounces of white or brown sugar and from 10 to 12 ounces of butter and lard for each quart, 2 to 4 eggs and egg color if desirable; salt may be left out if the butter used is very salty.

ROLLING IN THE BUTTER.

Each quart of liquid used produces from 7½ to 8 pounds of dough. Divide in as many pieces as you have used in quarts; take (say) for each 7½ pounds of dough one pound of pliable butter, roll out dough as described at the beginning of this article, divide butter and roll as directed. Let it rest a few minutes, then work up in the larger pieces, such as rings, twist, torten, etc., or make up in small cakes. Pound pieces of such dough, made up into rings, twists and other shapes, with various fillings added, sell at from 20 to 30 cents each, according to quality; small cakes, 20 to 36 cents per dozen. Others are made up in two for five and five-cent pieces.

FILLINGS.

A variety of more or less expensive fillings are used in these pastries; also cinnamon sugar is sprinkled between some of these goods, which is often mixed with ground nuts or almonds, or almond paste is mixed with the sugar.

NUT-CRUMB FILLING.

Work one pound of almond paste smooth with three or four eggs; add 2½ pounds of brown sugar (light brown sugar preferred); 3 to 4 pounds of cake crumbs soaked in water to make a smooth, spreading paste. Ground nuts or almonds may be used in place of the almond paste; flavor of cinnamon or vanilla and mace may be added.

FRUIT FILLING.

1¼ pounds almond paste; ¾ pound butter; 2 pounds sugar (half brown sugar, half white sugar); 6 ounces citron; 4 ounces candied orange peel finely chopped with ½ pound of seeded raisins and mixed in a soft paste with sufficient water.

EGG FILLING WITH ALMOND PASTE.

Mix 1 pound of almond paste and 1¼ pounds sugar into a smooth paste with 2 whole eggs and from 4 to 5 yolks into a smooth paste.

LARGE RINGS; NUT ROLLS; STOLLEN.

Roll the prepared dough out into a thin sheet on the table. Cut in long square pieces of about 10x6 inches, each piece to weigh from 8 to 16 ounces, according to price obtained. Spread some of the given filling on each piece, or use jam, or sprinkle with cinamon sugar, chopped citron, nuts and sultanas, etc. Roll up like a jelly roll; form in ring shape; join ends nicely together, and set on pans; when half proved cut the top around in the center, cutting almost to center of roll; finish proving, egg-wash and bake in medium heat. Ice over when done; sprinkle with a few chopped nuts while the icing is soft. Stollen or nut rolls may be made from the same cuts by rolling the pieces up from the narrow ends, rolling them up rather close, and slightly press and shape ends pointed in vienna loaf shape. When half proved make a straight cut along the center, not cutting to the ends, so they hold together; prove and bake like the rings.

DANISH TORTE.

Take about one pound of prepared dough made of rich coffee cake dough rolled in with good butter; roll into long squares; fill thickly with the given fruit and almond filling; roll up and place in a round pan; let prove up half, cut around center, as for rings; egg-wash, sprinkle with blanched sliced almonds and bake in moderate oven. Frost with a good water icing flavored with rum or maraschino.

SMALL COFFEE CAKE: CRESCENTS.

Roll out into a thin sheet, cut in strips 4 inches wide, cut each strip in even triangles. Fill each of the triangles by making a slight cut about half through the paste on one side, inserting some of the given egg and almond paste filling with a smal ltube. Roll up, giving only two turns, form in crescent shape, set on pans, prove; egg-wash and bake; frost with water icing when done.

RINGS AND PRETZELS.

A variety of these are made by rolling in the dough (after the last folding) some raisins, cinnamon sugar, chopped nuts or citron, lemon or orange peel; and with plainer kinds, instead of rolling in extra butter, the coffee cake dough is rolled and washed with melted butter, sprinkled with cinnamon sugar and fruit and nuts etc., and folded up and made up in different shapes. Roll out into a sheet about one inch thick and 10 to 12 inches wide; cut strips 1½ inches wide, twist each strip rope fashion; then place on the pans in ring or pretzel shape; proof, egg-wash and bake. Frost with water icing when done. They may be sprinkled with chopped almonds after washing with egg before baking, or some chopped nuts may be put on the frosting after baking while the frosting is soft.

JAM ROLLS.

Roll prepared in strips 4 to 5 inches wide, 16 to 18 inches long, ⅓ inch thick. Put along the center of each strip some raspberry jam, fold sides over to enclose the jam. Pull out strips, flatten each strip, then divide in pieces to sell two for five cents or one for five cents; let prove; egg-wash; sprinkle with a few chopped nuts; bake in medium heat; ice with a good lemon-flavored water icing.

DANISH OR SWEDISH ROLLS—QUICK METHOD.

When preparing the dough use 4 ounces of yeast for each quart of liquid. Let dough rest 20 minutes, then roll in one pound of butter per quart. With the fourth rolling sprinkle with cinamon sugar and chopped nuts. Roll out into a sheet of ⅓ inch thickness, cut in 3-inch squares, fold the corners to the center, press down, set on pans, about 2½ dozen on each pan of 18x25 inches; wash with egg, put a dot of pastry cream in each center. Let prove and bake in 360 to 375 degrees. When baked put a dot of icing on the cream in the center.

PECAN ROLLS.

These rolls are made from a good coffee cake dough which is made as follows:

For Sponge—One gallon water; 4 ounces yeast; 10 pounds of flour (one-fourth flour, three-fourths bread flour). Set at 80 to 82 degrees, let rise and drop.

For Dough—One-half gallon straight milk; 3 pounds sugar; 3 pounds butter and lard; 3 ounces salt; 15 eggs; flavor of mace or lemon; sufficient flour to make a smooth dough. Add milk and break up the sponge, cream sugar, shortening and eggs same as for cakes; add flavor. Let dough come up fully twice, then bake.

For pecan rolls scale pieces from 14 ounces to 1 pound each, mould in long ovals on the flour-dusted bench; let proof up; then with a rolling pin roll into oval pieces about 14 inches long by about 6 inches wide in center. Brush each piece with melted butter; sprinkle first with ground pecan nuts, then again each piece with cinnamon sugar. (We use broken pecans). For cinnamon sugar add 1 ounce of ground cinnamon to 5 to 6 pounds granulated sugar.)

The pecan rolls are rolled up like the well-known Vienna crescent rolls; when rolled up they are set on greased baking pans, in straight shape, the ends tapering; when rolling up the ends must come in the center and placed on the bottom. Let the rolls proof to about double size, or so they may be cut without falling. Wash with egg wash; cut along center with a sharp knife, but only about to center of roll, then let rise again for 10 to 15 minutes and bake in a good heat. When baked and partly cooled, the rolls are iced with vanilla white frosting, and a few chopped pecan nuts are sprinkled on the iced part while the icing is soft. These rolls have proved to be good sellers.

PAUL RICHARDS.

PECAN BUTTER ROLL.

There are several kinds of rolls or coffee cake made from sweet yeast-raised dough, and called pecan rolls. The pecan rolls referred to by a subscriber as *"made to resemble cinnamon rolls, baked six in a round pan, have some kind of a syrup put in the pan first,"* are made as follows:

Roll out a good coffee cake dough into a sheet about ¼ inch thick and about 12 to 18 inches wide; brush over with melted butter; sprinkle with a mixture of cinnamon sugar to which some ground pecan nuts have been added. Roll this sheet up into a roll, then cut into pieces about 1 inch thick. Set t he pieces in the prepared pans—six, seven or eight pieces in a pan, according to size of pans used; one of the pieces in the center, the other pieces around it. To obtain the syrup the baker speaks of, prepare the pans as follows: Take soft butter (not melted) just softened, and brush the pans very thickly on bottom and sides with the butter; it must be put on rather thick. Take light brown sugar, sift it well, fill in the buttered pans and shake out the surplus which does not stick to the butter in the pan. It is this mixture of butter and sugar which makes the syrup or glazing. Care must be taken to avoid rolling up the roll too tight; and to set them rather loose in the pans. If rolled tight the center pops up in baking, leaving a cavity in the bottom which looks unsightly and no syrup adheres to this part. The baking also requires great care, as the sugar and butter burns easily if oven has a strong bottom. Bake them in medium heat, and when baked and while hot they must be turned out, bottom up. The sugar and butter form an appetizing light brown caramel.

This roll is an adaptation of the well-known Philadelphia butter bun, which used to be very popular in former years. It may be made from a plain bun dough, the pans buttered and sugared as directed and sold in single pieces. We use a slightly larger pan, of 9 inches in diameter, 1 inch rim; this holds eight rolls. We use good butter for dough, also in pans. After turning the rolls. from the pan they are iced with a thin cream frosting and a few chopped pecan nuts sprinkled on top. Mixture used: 1 gallon milk and water; 8 ounces yeast, soft sponge for doughing; ½ gallon milk; 3 pounds sugar; 3½ pounds butter and lard; 3 ounces salt; 1 quart eggs; flavor of mace and lemon.

GOLDEN ROLLS.

Take sweet dough to which some sultana raisins have been added. Roll the dough out same as for cinnamon buns or snails. Wash with melted butter and sprinkle with cinnamon sugar to which a handful of ground nuts have been added; roll up and cut

in slices—each piece to weigh about 2½ ounces. Set in rows, cut side up. Let prove and wash with egg wash. Put some pastry cream in a bag with a small tube and put a ring of the cream on each of the rolls. Bake in medium heat. While hot brush over with a syrup made with one pint of water and 1 pound 10 ounces of sugar to give a nice gloss.

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